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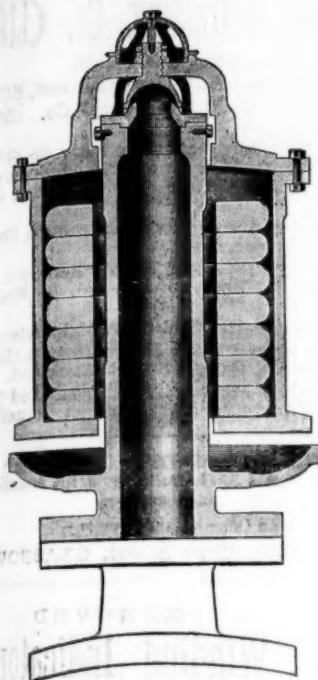
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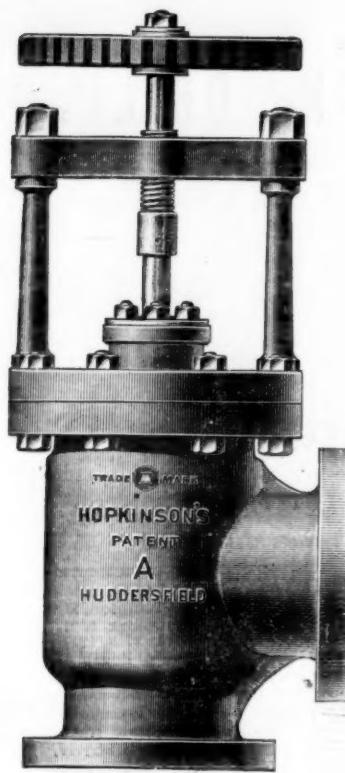
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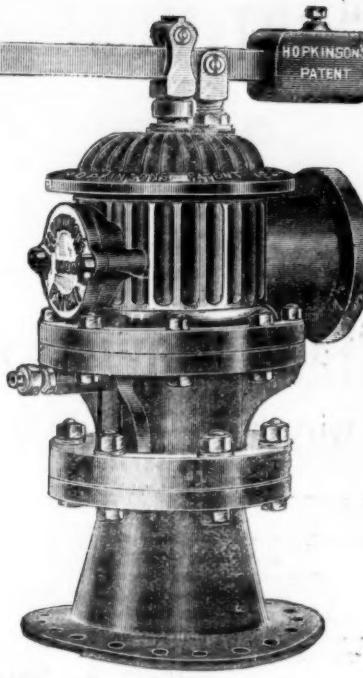
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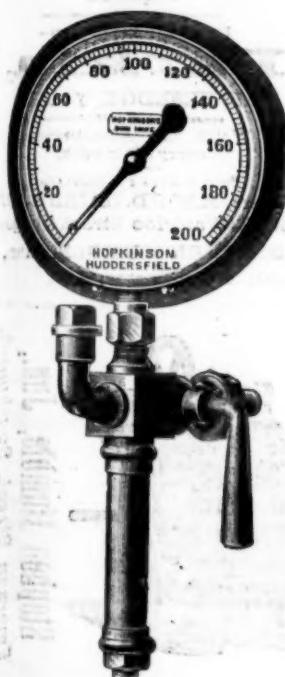
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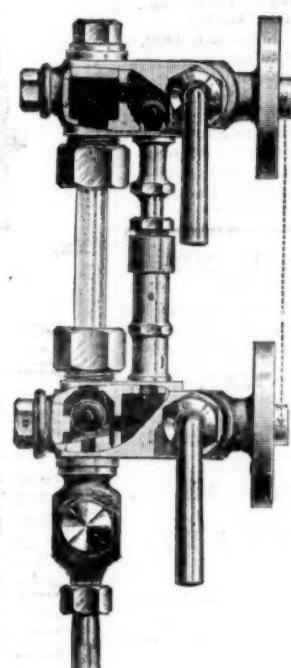
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FIG. 100.



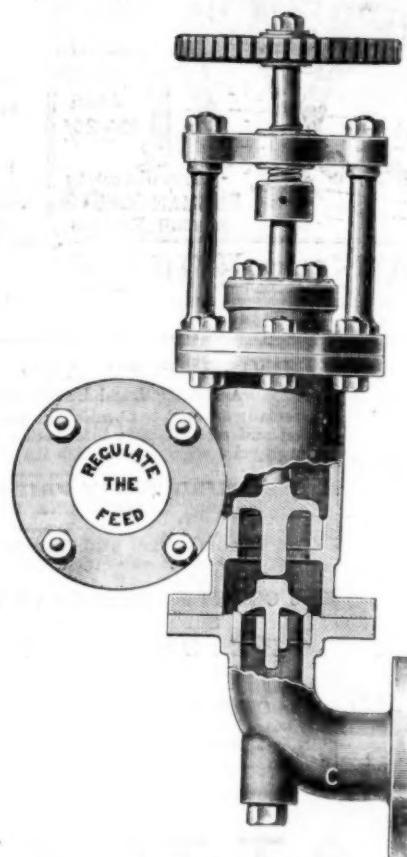
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FIG. 10.



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FIG. 611.



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FIG. 132.

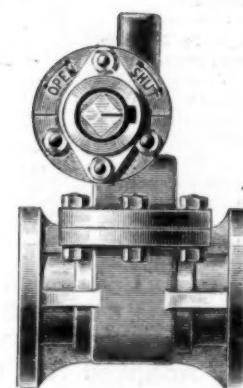
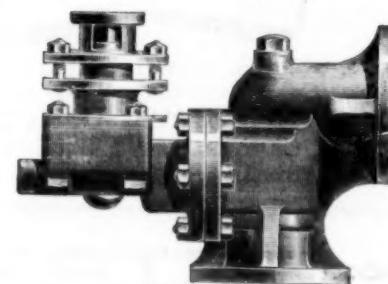


FIG. 251.



HOPKINSON'S  
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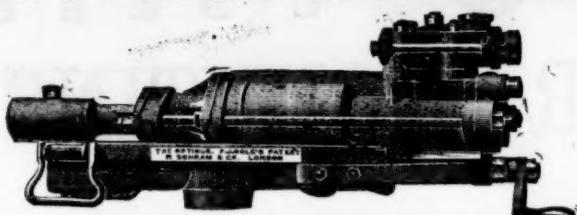
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From His Grace the Duke of Rutland.

Belvoir, Grantham,

December 1st, 1879.

SIRS.—Elliman's Royal Embrocation is used in my stables; I think it very useful.

RUTLAND.

Master of the Belvoir Hounds.

From the Earl of Harrington.

January 9th, 1889.

SIRS.—Elliman's Royal Embrocation is used in my stables, and I consider it the best that I can obtain. HARRINGTON.

Master of the South Wilts Hounds.

From Major M. J. Balfe,

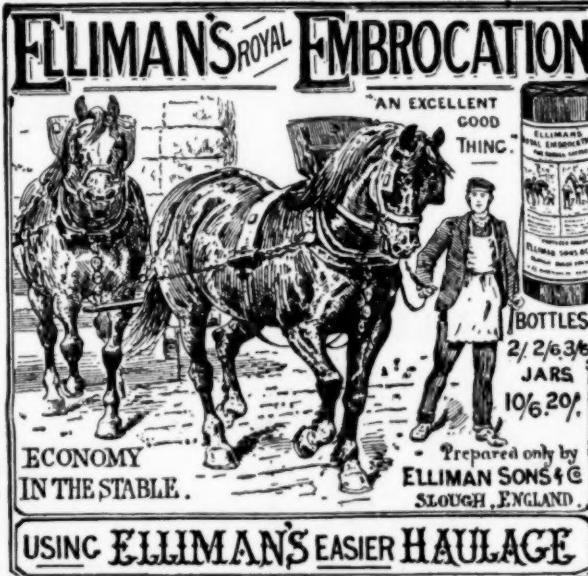
South Park.

June 16th, 1892.

SIRS.—Elliman's Royal Embrocation is used in my stables, and I can highly recommend it.

M. J. BALFE.

Master of the Roscommon County Staghounds.



From Lord Haddington, Tynningham, Prestonkirk, N.B.

December 27th, 1885.

SIRS.—Elliman's Royal Embrocation is used in my stable, and I consider it indispensable in any stable, but especially in the stable of a Master of Hounds.

HADDINGTON.

Master of the Berwickshire Hounds.

From R. Burdon Sanderson, Esq., Warren House, Belford.

July 10th, 1892.

SIRS.—Elliman's Royal Embrocation is used in my stables and I consider it very useful.

R. BURDON SANDERSON.

Master of Percy Foxhounds.

From Wm. J. Buckley, Esq., Penyfael, Llanelli.

July 16th, 1892.

DEAR SIRS.—I have much pleasure in recommending your Royal Embrocation. I always keep a stock in my stables and kennels. My farm bailiff has also found it of much value among my herd.

W.M. J. BUCKLEY.

Master of Carmarthenshire Foxhounds.

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8, Post Office Chambers, Sydney, N.S.W., Charters Towers, Queensland, and Mr. Geo. S. Fowler, J.P., Adelaide.

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Chili—Mr. Wm. Jones, Calle Almendro, Valparaiso.  
New Zealand—The Cassel Gold Extracting Co. (Ltd.), 6, Herald Buildings, Queen Street, Auckland.

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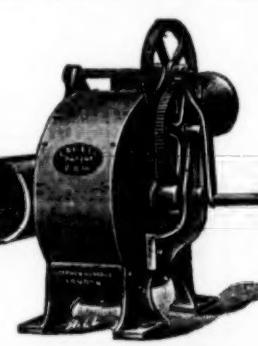
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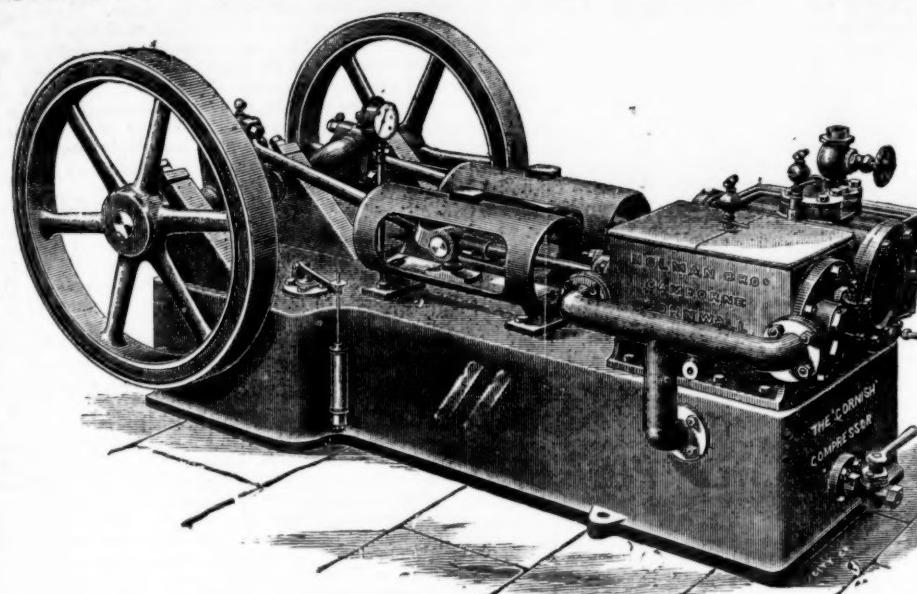
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At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO new Patent CORNISH ROCK DRILLS**, drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour

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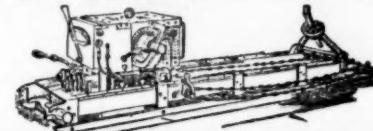
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## CONCENTRATION.

The Clarkson-Stanfield Concentrator (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

**OUTPUT  $\frac{1}{2}$  TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.**  
CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS

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The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

## NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 31, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

1327 Luigi De Maio, 22, Kildare Gardens, Bayswater, London.—Evolving platen steam engine.—October 7.

1328 Walter Kitto, 56, Claybrooks Road, Hammersmith, London.—An apparatus for simultaneously crushing, pulverising, and sieving metalliferous ores and other hard substances by either wet or dry systems, such as gold and silver quartz, rock, copper and lead ores, oxides, &c.—October 7.

1329 John Edward Greenly, Estate Buildings, Huddersfield.—Improvements in and relating to steam generators.—October 8.

1330 John Chalmers, 67, St. Vincent Street, Glasgow.—Improvements in single-acting multiple cylinder bearings.—October 8.

1331 John Galton, 40, Chancery Lane, London.—Improvements in railroad ties.—October 8.

1332 Louis James Gregerson, 40, Chancery Lane, London.—Improvements in railroad spikes.—October 9.

1333 William Fraser, 39, Anderson Road, Sparkbrook—Improvements in mechanical stokers.

1334 Frank Edward Buxton, 5, John Dalton Street, Manchester.—An improved method of making and applying electric rail bonds.—October 11.

1335 Herbert Allen Wheeler, 27, Southampton Buildings, Chancery Lane, London.—Improvements in steam condensers.—October 11.

1336 Julius Leonard Fox Vogel, 53, Chancery Lane, London.—Improvements in the production of alkaline cyanides.—October 11.

1337 Frederick Josiah Clinch-Jones, Delaware, Springfield Road, King's Heath, Worcestershire.—An improved method of recovering tin and other metals.—October 11.

### SPECIFICATIONS PUBLISHED.

1329 MacLean and Bell, extracting gold by electrolysis, 1894 : 13279, Hogan, extracting precious metals from ores, 1894 : 2091, Thompson, metal tubes for boilers, condensers, &c., 1894 : 22191, Murray, silver compound, 1894 : 2110, Lake, steam, &c., engines, 1894 : 11185, Game, furnaces, 1894 : 12913, Laufer, miners' safety lamps, 1895 : 13871, Smithson, boiler furnaces, 1895.

The above specifications published may be had of Messrs. Rayner and Co., 371 Chancery Lane, London, at 10d. each, including postage.

## JOINT-STOCK COMPANIES.

### NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

British West Australian Mines and Shave Corporation (Limited).—Registered October 17, by C. A. Ulshaw, 1, Greenwich Street, E.C. Capital £100,000, in £1 shares (10,000 founders). Objects: To examine, prospect, explore, develop, maintain, and work mining claims, leases, and concessions, alluvial deposits, mines, minerals, &c., in West Australia or any other part of the world, and to carry on the business of a mining, milling, smelting and metallurgical company in all its branches.

Gold Fields Finance and Development Company (Limited).—Registered October 17, by Wilson, Bristows and Carpmael, 1, Calthai Buildings, E.C. Capital £100,000, in £1 shares (5,000 deferred). Objects: To acquire, develop, and generally turn to account any concession, grants, rights, or leases, decrees, powers, or privileges from any company, state, sovereign, authority, or person, and to carry on business as land and mineowners, as miners and smelters, metallurgists, metal workers, builders, &c., in all or any of their respective branches.

Mammoth Collin Gold Miners (Limited).—Registered October 17, by Williams and Neville, Winchester House, E.C. Capital £100,000, in £1 shares. Objects: To add to and carry into effect an agreement between the Mammoth Gold Miners (Limited) and J. W. Woodthorpe of the first part, and this company of the other part, for the acquisition of certain gold mining claims, known respectively as The Mammoth, Mammoth Wedge, Mars, Raven, Remnant, Remnant extension, Jenny Lind, and Nightingale, together with four other claims, known respectively as The Hackney, Erfleth, Avon, and Wedge, the same being known as Collin's Mines, and situated at Mammoth Camp, Pinal County, Arizona, U.S.A.; to develop and turn to account the said properties in such manner as the company shall see fit, and to carry on the business of a mining, milling, smelting, and metallurgical company in all or any of its branches.

Hannan's Golden Dyke Mines (Limited).—Registered October 17, by Goodchild and Hammond, 1, Queen Victoria Street. Capital £100,000, in £1 shares. Objects: To adopt and carry into effect an agreement between M. Cohen of the one part, and this company of the other part, for the acquisition of certain mines, mining, water, and other rights, grants, leases, claims, concessions, &c., situated at Hannan's Find, Guntheringe, Claines, to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all or any of its branches.

Hannan's Central Gold Mine (Limited).—Registered October 17, by Hays, Schmettan and Co., 31, Abchurch Lane, E.C. Capital £75,000, in £1 shares. Objects: To acquire any mines, water and other rights, grants, leases, claims, concessions, options, metalliferous land, &c., in Western Australia or elsewhere; to develop and turn to account the same, and to carry on the business of miners, millers, and smelters, metallurgists, carriers, shipowners, warehousemen, wharfingers, barge owners, &c.

Gray's Golden Crown (Limited).—Registered September 17, by Burn and Berridge, 11, Old Broad Street, E.C. Capital £100,000, in £1 shares. Objects: To adopt and carry into effect an agreement made September 17 between the Employers' Syndicate (Limited) of the one part, and A. H. Oxenford, on behalf of this company, of the other part, for the acquisition of certain property, particulars of which are given in the said agreement, and to develop and turn to account the same in such manner as the company shall deem expedient.

Cooper Cooper and Company (Limited).—Registered October 8 by Harwood and Stephenson, 31, Lombard Street, E.C. Capital £100,000, in £1 shares (40,000 preference). Objects: To acquire as a going concern the business of wholesale and retail dealers in tea, coffee, and cocoas, carried on in London and elsewhere, under the style of Cooper and Co., in accordance with an agreement between T. Meares, J. Young, and E. H. Absolom of the one part, and this company of the other part, and to carry on and extend the said business in all or any of its branches.

Golden Mountain (Limited).—Registered October 18, by J. H. Farmer, 18, Austin Friars, E.C. Capital £100,000, in £1 shares. Objects: To acquire any mines, water and other rights, grants, leases, claims, concessions, lands, hereditaments, options, &c.; to develop and turn to account the same in such manner as the company shall see fit, and to carry on the business of a mining, milling, smelting and metallurgical company in all or any of its branches.

The first directors—of whom there shall be not less than two nor more than five—are to be elected by the signatories. Qualification, one share. Remuneration, £10 per annum each, and a percentage of the profits—the latter being divisible.

## CONTRACTS OPEN: FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

\* We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the address given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

### HOME CONTRACTS.

Railway Stores, November 13 (Brussels).—The Belgian State Railways Administration invite tenders for the supply, during 1896, of bolts, rivets, screws, plates, chains, pulleys, chairs, &c. Specification No. 319 at the Bourse, Brussels.

Coal, November 4 (Lyon).—For sundry supplies, including one lot of 320 tons of coal, for the Manufacture de Tabacs de Lyon.

Coal, November 4 (Perth, Scotland).—For supply of 70 to 70 tons good house coal. Tenders to be sent, sealed, marked "Perthshire Coal," to the Rev. James George, Pentney Vicarage, Swaffham, by November 4, stating quality, description, and colliery. Coal delivered at Narborough Station, G.E.R., December 17; trucks cleared December 18 and 19. Cheque seven days after delivery. Quantities required will be notified before the end of November.

Boiler, November 9 (Nottingham).—For supplying a Lancashire steel boiler, 26 feet long and 7 feet diameter, for the Corporation, Form of tender and particulars of Mr. Arthur Brown, M.I.C.E., borough engineer, Guildhall, Nottingham. Tenders, endorsed "Tender for Steel Boiler," are to be sent in by November 9.

Electric Motor Bogie Cars (Guernsey).—The Guernsey Railway Company (Limited) invite tenders for two electric motor bogie cars, with top transverse seats and reversible backs, to seat 80 persons, and suitable for the overhead wire system. Particulars on application to the Secretary, Guernsey.

"THE BOY STOOD ON THE BURNING DECK."—Some irreverent person has inscribed that his reason for so doing was that it was too hot to sit down; but this is a libel. The reason was that the gallant boy would not desert his burning ship, and went to a glorious death. But suppose at the last moment young Casablanca had been saved, what then? He would certainly have been very much burned, and the best thing for him would have been an immediate application of Holloway's famous Ointment, a certain remedy in all cases of burns, scalds, abscesses, rheumatism, lumbago, sciatica, bronchitis, asthma, neuralgia, and the like.

## GOLD MINING PROSPECTS IN THE MALAY PENINSULA.

(By A CORRESPONDENT.)

**N**EWS has reached this end of the world that the prospectus of a subsidiary company has been issued by the Straits Development Company, the new company to be styled the Cherubang Gold Mining and Exploration Company, the company being formed to work what is stated to be a recently-discovered reef at Cherubang Creek, a portion of a concession named Passoh, obtained some time past by the Straits Development Company, and situated somewhere on the boundaries of the States of Negri Sembilan and Pahang. The capital of the company is to be £100,000; 70,000 shares to be offered to the public. The new company, it is stated, has been formed on the strength of a sample of 12 cwt. taken to London recently, and showing an assay to yield 3 ounces 12 grains to the ton.

Now, all this looks very pretty on paper, and very feasible, and on the prospectus, no doubt, will look much better, especially as it is embellished by a host of other things, possible, but not at all probable such as timber merchants, planters, &c., &c. The hook seems to be baited well, and it may be supposed the gullible public will swallow it. So far as timber is concerned, that business is all overdone throughout the East, so it can be written off as *nil*. Planting is quite a different matter, and is feasible enough, and is in its infancy in the Malay Peninsula. Here the word "planting" is meant "cultivation of the soil carried on by the knowledge given through modern agricultural science." Hitherto, agriculture in the Peninsula has been subject to primitive conditions—the lazy native, the water buffalo, and water running, or flowing, at its own sweet will.

It may be confidently stated that if one half the money thrown away on the absurd idea of obtaining gold out of the strata of the Malay Peninsula had been laid out in planting all marketable products on the concessions, the shareholders now would be receiving good dividends, and their properties always increasing in value; but, as things are at present, most of the concessions are scarcely worth the paper their titles are written on, and the machinery on them have not even the value of old iron, for it would not pay to carry it off the ground.

If we take notice of the published records alone of the gold mining companies at work in the Peninsula, we must, if we have any idea of or knowledge and experience in gold mining at all, acknowledge that they are what in old gold mining countries are known by the name of "Linger and die concerns," their death being a mere question of time, when the last feather shall have broken the camel's back.

But there are those who ask the question—where does the gold come from that is found in the country? Colours and grains of gold are found in the creeks, on the sides of hills, in alluvial tin workings. Yes! that is a fact, and it is there where the mischief lies. Because a little drift gold is found in a creek or along its margin, the inexperienced, the interested ones, and the sharp prospector employed for the purpose, of course, immediately exclaim—Ah! this is the spot, here is the concession, there is plenty of reefs here, and so a half ton, or, for that matter, a ton or two, can be easily made up, and sent as a sample to London, and for a valuable consideration a few specimens of gold-bearing quartz can always be obtained and thrown in with the sample, there being Malay residents in such places who always keep a stock on hand for such purposes—in fact, some of them being expert coiners—soon manufacture specimens from a few lumps of quartz and a little drift gold. The writer has found these worthies at various places all through the jungle, from Singapore, all the way round to Bangkok, and so on to the French Settlement of Sagon. Civilisation is doing wonders for the far eastern Asiatic. In pushing commerce and mining it licks the missionaries into a cocked hat. The natives soon find out how the wind blows, and trim their sails accordingly, and it matters very little to them so long as the wind blows dollars, for honesty and truth with them is an unknown quantity.

It is probable that a strip of country does exist in the northern portion of the Peninsula, which may be described as the true home of the gold from whence disintegrated portions have fallen and mingled with the drift in various localities. And this idea gains ground when we know there occurs on one side carboniferous strata, "on a far end of which some would be coal mine owners, recently lost their heads, and some dollars, on a bed of unprofitable lignite," and on other sides are found to occur silver, galena, copper, zinc, antimony, &c.—in fact, all the minerals found generally associated with *bond fide* reef gold—gold in its home and beauty—and occurring in that older strata which gives no uncertain indication, and seldom deceives. How large the area may be of such a gold-seizing field it is impossible to say, for it remains virgin ground.

Mr. Norman's concession at Temoli was the nearest apparent approach to it, although they knew it not; and it appears that no one yet has had either capital or energy enough, or both, to penetrate its secret. It has been said that not far from there some Chinese miners once worked their way up, following the gold, but the nude nymphs of the forest proving too great a temptation, they made enemies of the wild men, and were driven back. It is evident, however, if such a field does exist, let the reefs be rich or poor, it will remain comparatively unknown until a better government prevails, for it lies far outside the British protected states, and some distance from Negri Sembilan or Pahang.

Sometimes small reefs or ledgers, so called, have been worked by Chinese in various places, but in reality they have been nothing but drift specimen leads, such as are found sometimes long way from true reefing country—water-worn, or not—and such deposits have only given a fair return to the few people who worked them.

So far as legitimate mining is concerned, the Malay Peninsula has a long future before it; but tin must ever be its principal mining produce. Some of the tin alluvial districts of the south are being worked out, but rich deposits in large areas occur, with a break here and there, all the way to its northernmost point, and even beyond it, and when the drift tin shall be worked out tin lode mining will prevail, its development having already commenced with success in the State of Pahang. Immense deposits of lode tin will be found all through the Peninsula, and eventually be worked for centuries to come; here then is a chance for true exploring companies to prospect for tin lodes, and develop them sufficiently for the acceptance of larger companies, and it is this industry of tin mining, or else, on the other hand, planting, these being the only two ventures an English or any other company can possibly expect for some time to come to obtain any dividends in the Malay Peninsula. But to mine for gold under the auspices of this Straits Development Company, either in Pahang or Negri Sembilan, is about as insane a venture as well can be imagined.

**RARE MINERALS IN NEW YORK.**—While blasting for the new roadway along the Harlem river, in New York City, a discovery of considerable scientific interest was recently made. Several thousands of crystals of xenotime and monazite were found in blocks of mica schist and gneiss by a New York mineralogist. Xenotime is a phosphate of yttrium, occurring in yellowish brown tetragonal crystals, while the most valuable elements in monazite are thorium and cerium. In cleavite, which is one of this group of yttrium and thorium minerals, the elements of argon and helium were discovered, and it is declared that all the minerals of this group come in these new elements to a certain degree. The discovery of these minerals in that section of the country will doubtless be of incalculable aid to local chemists and scientists in their experiments relative to the newly-discovered gases.

THE WELSH GOLD PROSPECTING AND DEVELOPMENT SYNDICATE was recently registered. The first issue of capital for opening up the fine gold reef on their "Rhinog" property was over applied for. Work has now commenced.

## THE GEOLOGICAL STRUCTURE OF THE PYRENEES.

By P. W. STUART-MENTEATH, A.R.S.M.

**I**N 1886 the French Geological Society published the first part of my results regarding the mineral deposits of the Pyrenees, and in 1882 the present Director of the Spanish Survey confirmed and cordially recognised, in his description of Navarre, the accuracy of my mapping of the Western Pyrenees. The authors of all the French maps dealing with this region have applied to me for the lines they reproduce, except in the case of the official map of 1890, whose author adopted a singularly independent course, being in direct conflict with every geologist who has written on the Pyrenees. As a pupil of Ramsay and Murchison, encouraged by them to apply the methods of our survey to the Pyrenees, and having taken the first place in the geological examinations of the old School of Mines in 1865, I wish to make known, in my own tongue, some results of patient observation since that date. Having published more than 50 papers on Pyrenean geology in the troublesome French language, I cannot be fairly blamed for now stating results in another idiom. *The Revista Minera* has already granted me the hospitality of its pages. *The Mining Journal* will not find me disposed to bore its readers. Convinced that underground experience, the accurate mapping required in mining work, and the careful distinction between observation and supposition, are the best checks on rash geological speculation, I am anxious to submit to mining men results which solve the difficulties and remove the contradictions affecting a very extensive mining field. There is nothing more disheartening than long delay occasioned by apparent contradictions, and it may encourage others to learn that between 1886 and the present date I have gradually ascertained that my difficulties result simply from taking seriously the imaginary sections, supposititious faults, and too hastily-determined fossils of laboratory students innocent of field experience. Geologists of eminence have, I think, been misled in this same way.

In the western half of the Pyrenees, known chiefly through my own researches and those of the Spanish Survey, with which I am in agreement, the structure corresponds closely with that figured by the Austrian geologists in the eastern half of the Alps. Numerous French descriptions have attributed to the Western Alps and the Eastern Pyrenees a structure that appears impossible to a pupil of Ramsay, Jukes, and Page. As in mountain field work one daily meets with perspective (or photographic) outcrops, whose astounding anomalies are habitually resolved into mere illusions by serious survey, I have been led to suspect that the innumerable and habitually conflicting sections of the recent French school are really founded upon the very beautiful photographs which usually accompany them. The absence of any hint to the contrary certainly implies that many geologists regard such illusions as a serious basis for voluminous speculation. The late director of the French Survey moreover described my maps as *a priori* incorrect. His own lines in the Pyrenees were hence admittedly founded on something different from the *a posteriori* method, which last is, in plain English, hard walking, sleeping in forests and shepherds' huts, and leading the life of a brute or a brigand. At no smaller cost can a chain be explored.

In the Eastern Pyrenees the examples of stratigraphical marvels, which have promptly been discovered in support of the astounding sections of M. Bertrand in Provence, are already in part resolved into mere samples of palaeontological dogmatism. Fossil species supposed to prove an inversion of beds have turned out to be common to both top and bottom. The one case still in doubt evidently owes its origin to the circumstance that the existence of the Alpine Trias in the Pyrenees was only made known to the French Geological Society on November 5 last, although I had been gradually working out the subject for many years, establishing step by step the complete analogy in structure and composition between Austrian Alps and Pyrenees. The strange inversion in question is, I believe, simply a mass of the Alpine Trias in its normal position, unintelligible to observers who have never admitted its presence in the district of the Pic de Bugarache.

The main constituents of the Pyrenees are a secondary and a primary flysch; the first corresponding to the flysch of Vienna, and representing the whole of the Cretaceous and parts of the Nummulitic formation; the second representing the "schistes lustrés" of the Western and the Alpine Trias of the Eastern Alps. Both are peculiarly subject to metamorphism.

At least, in Europe, flysch appears to be the essential constituent of mountain chains; and in the Pyrenees I have found no satisfactory proof of the presence of any one of the sub-divisions of d'Orbigny. I heartily wish that I could dispense with these outlandish names—"Flysch" means a thin-bedded, much contorted, series of alternating marls, clays, and grits, which assume protean forms by metamorphism, and are so full of diabase or dolerite intrusions that they have been even attributed entirely to the action of submarine mud volcanoes. "Schistes lustrés" means much the same, and the "Alpine Trias" means something similar, with great lenses of limestone, whose origin is still in dispute. In my experience Heim and Rothpletz have best described these formations, but I have not yet seen the papers of Miss Ogilvie, who, I hear, has thrown new light upon them. Quite a new world of geology lies buried in the strange and laborious works of Schafhaule and a dozen others, which one cannot carry, any more than a compound microscope, in mountain exploration.

As a typical example of the Alpine Trias of the Pyrenees I may cite the band of old-looking, shiny schists between Sare and Espellette, which are often traversed by the Biarritz fox-hounds. Having classed these as Trias and Jurassic in my first map of the district (Bul. Soc. Geol., 1881) I have found them classified as pre-Cambrian in an elaborate work by M. J. Seunes, a student whom his professors had begged me to assist in a thesis for his professional interests. These schists are regularly interbedded between the gypsum of the top of the admitted Trias and a limestone abounding in characteristic fossils of the Middle Lias. The presence of granitic veins makes them *a priori* pre-Cambrian, because the student in question fancies that all granite is of primary age. He has drawn sections representing faults and contortions to justify his view, being apparently unaware that a geological section is commonly supposed to represent observed facts, and not *a priori* fancies. Faults being practically the same thing as lodes, I wonder what shareholders would say to a section of country representing a set of lodes that are not only purely imaginary, but deliberately introduced to make believe that older maps and sections are *a priori* inaccurate.

Practical geologists will find that these "schistes lustrés" are penetrated by the whole granitic mass of Cambo and Hasparren that they are invariably beneath fossiliferous lias, and that the graphitic marble of Louhossoa, always described as Archoean, is a mere lamellar inclusion in these Triassic schists. I proved the post-Triassic age of the granite of the

Trois-Couronnes in 1881; after much ridicule, the survey geologists now admit that most of the granite of the Pyrenees is post-Carboniferous. I have ascertained that the granite of the chief granitic masses of the Pyrenees is not merely post-Triassic, but even in part composed of altered rocks of Triassic age. The proofs are endless, and will be published shortly. The only fact ever cited to the contrary is an observation of Charpentier in 1820, to the effect that granite pebbles appear in the Trias. Those who quote this statement have not remarked that Charpentier classes in the Trias a vast extent of Upper Cretaceous conglomerates, which do, in fact, contain granite pebbles in every part of the Pyrenees. Mineralogically these conglomerates are often identical with the Trias. Charpentier clearly defined the *mineralogical* and entirely *palaeontological* character of his classification, and expected to be read before quoted. His work, if read, would mislead no observer, and the same may be said of Palasson, Durocher, Dufrénoy, Lezmerie, Poruch, and all the officers of the Spanish Survey. To all these misquotations is invariably applied by the compilers who have succeeded them, and who have no time for direct observation.

A central zone of Alpine Trias is, as in the sections of Rothpletz of the Eastern Alps, the main constituent of the Pyrenean Cambrian in the official Geological Map of France (1890). The astounding fact is, that in this supposed Cambrian I have found fossils of singularly Cretaceous character over at least half of the Pyrenees. These fossils are, moreover, identical with the fossils supposed to be Cretaceous by several French geologists, and it is absolutely certain that both are contained in the base of the supposed Cambrian of the official map. The admittedly Cretaceous fossils abounding to the south of Eaux Chaudes are contained in the base of a thick band of limestone, which is classed as Cambrian throughout the Pyrenees, and which contains, throughout the Pyrenees, the same apparently Cretaceous fossils as at Eaux Chaudes. Misled by sections published for the French Survey, I have, hitherto, admitted a distinction. Having recently revised the said sections, I have found that they represent, as identical and continuous, two bands of limestone separated by more than 3 miles, and also by a third band of limestone. It follows that the Cretaceous fossils are at the base of a vast calcareous zone extending throughout the Pyrenees. In this zone I have found, associated with abundant palaeozoic corals, Belemnites, Ammonites of the Ceratite group, Oysters, Nerines, Rudists, Fusulines, Cidaris, and the many Brachiopods, mimicking Cretaceous forms. A test case is evidently presentable, and the question how far fossils are reliable, in flat contradiction to stratigraphical evidence, may be investigated by any geologist who will examine the fossils abounding in the base limestone lying on the granite to the south of Eaux Chaudes. There is absolutely no escape from the admission that either an apparently Cretaceous fauna existed in Triassic times, or else the Pyrenees are, from end to end, upside down, the Trias resting on the Cretaceous. The fauna in question is hardly more startling than that of St. Cassian and Halstadt appeared to be 30 years ago. The anomalies of Halstadt have been very plausibly explained away, and there will be no greater difficulty in proving that the apparently Cretaceous character of the fossils of Eaux Chaudes is a mere illusion. I fear, however, that for some years to come, imaginary faults, stupendous reversals, &c., will be invoked to explain the seeming anomalies of the Pyrenees. Till such explanations have resulted in some stupendous contradiction, it will be impossible to induce belief in the facts of observation. The mineral deposits of the Pyrenees and of the very similar extension of the same chain to the Asturias, will remain enveloped in a chaos of contradictions until another Secretary of the French Academy has arisen to contradict the theories of his predecessors. Meanwhile, English geologists will, I think, find the rocks of the Pyrenees both more intelligible and more interesting if they take note of my remarks.

The marble of the Ossau Valley, and of St. Beat, is of the same age and quality as that of Carrera. It extends throughout the Pyrenees, and holds together Belemnites and palaeozoic corals, both of the Alpine Trias. The discovery of Belemnites in this marble, previously classed in the Middle Devonian, confirmed, more than anything else, the existence of the Alpine Trias. This formation surrounds the main granite masses of the Pyrenees, and in it the granite gradually appears through a network of veins of porphyry. There is not, to my knowledge, any trace of primitive granite in the chain, and accounts to the contrary appear to be instructive examples of the extent to which the tortured and selected specimens ground by optimists may be a source of factitious classification.

In any geological map of the Pyrenees one remarks the singularly irregular and fragmentary distribution of the Trias. The fact is that the Trias exists in three forms, or *facies*—Red Sandstone, Schiste Lustré, and Alpine Limestone or Dolomite—the last being frequently of distinctly Coralline character, and often abounding in Corals. Of the first *facies* I gave careful sections in 1881, and the other forms occupy the apparent space between the Red Sandstone masses, whose remarkable and sudden variations in thickness thus become intelligible. The Alpine Trias of the Pyrenees occupies, precisely as in the Eastern Alps, the central zone of the chain; it is characterised by contortions of remarkable character, and separated by great faults or unconformities from the Cretaceous series. The summits of the Vignemale, the Pic du Midi, the Pic Tong, and many others, are composed of this formation.

About 300 Pyrenean sections were published in the last volume of the French Official Survey. These sections represent an isolated cap of Cretaceous, perched on the summits throughout the western half of the Pyrenees, the identical rocks which the last director of the Survey classed as Cambrian, because they visibly dip under and disappear beneath the oldest rocks at the bottom of the deepest gorges. When I maintained that these rocks were identical with the supposed Cretaceous of Eaux Chaudes I did not expect official confirmation of this nature, and I am at one with M. Jacquot regarding the observed facts. It is only as regards their interpretation that I differ from that eminent observer.

At this moment I am extending levels in a wide lode of quartz and cinnabar belonging to the Alpine Trias, formerly attributed to the Cretaceous. In the same neighbourhood I have worked several lodes of grey copper, containing 7 per cent. of tin, and bismuth is not uncommon in the same formation. It is certainly difficult to class and compare such deposits if Triassic rocks are attributed at random to the Cretaceous or the Cambrian. It is a pity that my results will for long appear distasteful to those identified with prevailing currents of opinion.

**PENSIONS IN THE GEOLOGICAL SURVEY OF INDIA.**—A resolution has been published announcing that the Secretary of State for India has sanctioned the extension of the scale of pensions laid down in Article 712 of the Civil Service Regulations to officers appointed from England to the Geological Survey of India; but, inasmuch as the existing rules of this service are in some respects more advantageous than the scale laid down in Article 712, the Viceroy is pleased to allow every officer appointed from England the option of choosing between the two scales, and to direct that the new scale shall not be extended to any officer preferring to remain subject to the existing rules.

## THE TRAINING OF A MINING ENGINEER.

An inaugural address delivered at the Durham College of Science by Henry Louis, A.R.S.M., F.I.C., F.G.S., &c. Professor of Mining.

(Continued from page 1266).

I WILL now review, briefly, the various sciences that the mining engineer more especially requires in his connection for his mining. First of all, naturally, comes the subject of mathematics. The higher mathematics are of immense value, not only for educational purposes as a system of mental training, but because all modern sciences is tending more and more every day to form a portion of mathematics. Physics have long been a branch of applied mathematics, and chemistry is fast becoming one. Whilst these higher branches are thus of great value and assistance, certain of the lower ones, including the more elementary portions of algebra, trigonometry, and geometry, are absolutely indispensable. I need only remind you of their use in surveying and in engineering calculations; besides, it is almost a truism that a man who is working for pecuniary results should be good at figures.

Chemistry plays an important part in a mining engineer's curriculum; its theory, because a knowledge of the laws governing the constitution of matter is indispensable as a basis of scientific work, and its practice because a mining engineer is constantly called upon to make assays of the minerals he is winning, and may need to analyse any other substance he meets with underground, as, for instance, mine gases. And even if he employs a chemist to make his analyses for him, unless he knows chemistry, he will not be able to understand as he should, the results which are submitted to him. For this reason the mining engineer must not only study theoretical chemistry, but must himself work sufficiently long in the laboratory to become proficient in qualitative and quantitative analysis, and in assaying.

Physics, again, not only teach the student the laws that govern the motion of matter, but is every day becoming of greater practical importance. Electricity, especially, has been playing a most important part in mine engineering; I need only mention electric coal cutting, electric underground and surface haulage, and the electric transmission of power, to remind you of the number of applications that this science has found of recent years; and indications are not wanting that further developments of this force will be produced before long that will almost revolutionise some aspects of mining. There seems little doubt that we shall have to look to electricity in the near future to provide us with a really perfect form of safety lamp, and that if ever explosions in coal mines are to become a thing of the past it will be through the agency of the electric light. It may indeed be said that there seems scarcely any limit to the potential application underground of this most convenient force. I hold, therefore, that besides theoretical physics, a mining engineer's training should include a short time in an electrical laboratory or shop where the student may be familiarised with the construction of electrical machinery, and the application and measurement of electric currents.

Of the importance of mechanics, little need be said; such subjects as machine construction, strength of materials, the steam engine, water motors, and many others come so obviously into the every-day practice of the mining engineer, that he must therefore study their principles thoroughly. A mining engineer is so often called upon to design machines for various purposes, or to test the efficiency of a machine already constructed, that he must be a good mechanic. I hold that it is not necessary for him to actually serve any time in workshops, although he will often find it an immense advantage to be able to use some of the simpler engineers' tools, and more especially to do a little smithing; in out of the way corners of the world I have found the ability to sharpen a drill or to point a pick of greater value to me than might be supposed by those who have never prospected in remote regions.

These three sciences—chemistry, physics, and mechanics, together with the all-pervading mathematics—form the basis of the mining engineer's training. Next come what may be called the secondary sciences, more closely connected with the miners' special work. These are geology and mineralogy. Geology is, to a great extent, the scientific basis of mining; the man whose daily duty it is to exploit certain portions of the earth's crust must know thoroughly the rocks of which it is composed, their appearance, their composition, and the mode in which they were formed. He must not only know geology thoroughly, but must also have some knowledge of the subjects most closely connected with it. For instance, he must know something of paleontology. Evidently, the more he knows the better, but a fair general knowledge, without entering into minute details, is all he needs. Thus he ought to be able to recognise a tribolite when he sees one, and to know that if he comes across strata containing these fossils he need not waste money in sinking deeper in search of coal beds. This knowledge is quite enough for practical purposes, and he would not be any the better off, practically, for being able to name the genus and species to which the tribolite might belong.

Similarly as regards lithology; this science in its ultimate developments is best left to specialists. All that a mining engineer really requires is to tell broadly what class of rock he is dealing with. It does not matter much to him, as a rule, whether a certain rock that he might come across is (say) a diorite or a diabase, provided that he knows, beyond the possibility of mistake, that he is not dealing with a stratified rock, and what the effect of a dyke of igneous rock is likely to be upon the strata which it traverses. In fact, for the mining engineer physical geology is the most important part of the subject, and one which he must have at his fingers' ends. It is, perhaps, needless to say that geology must be studied in the field no less than in the lecture room, and that the mining engineer ought to be familiar with all the various indications by which geological phenomena can be recognised and traced.

Mineralogy, including crystallography, deserves more attention than is usually devoted to it. The ability to be able to recognise at once any mineral that he comes across is of immense use to the mining engineer, and in this he is always greatly assisted by crystallographic indications. I may quote a case in point: I was once sent to report in great hurry upon a deposit of magnetite in Nova Scotia that was offered for sale as a Bessemer ore. I found, on examining the ore, that it contained minute needle-like crystals, which, under the lens, appeared as hexagonal prisms, and which from their crystallographic characters I concluded to be a mineral called apatite, consisting of phosphate of lime. I accordingly broke off the negotiations at once, and subsequent analysis confirmed the correctness of my diagnosis; here, then, was an instance in which a knowledge of crystallography saved much time and, possibly, a heavy pecuniary loss. Another instance that came under my cognisance was that of an engineer who had to report on a silver-lead mine. He took his samples from various points along the levels, and as his assays gave very satisfactory results, he was preparing to report favourably, when a close examination of some crystals of galena that he had broken

out from the roof of a level showed Portland cement on the back of the specimens. Needless to say, this discovery was enough to show him that the mine had been "salted." These two examples will, I hope, suffice to show how the knowledge of what is really a pure science can have a very practical value, even in the commercial sense, for a mining engineer.

We now come to the course on mining proper, to which the previous subjects serve as foundation, so to speak. I have not attempted, and in a college like this, with a staff of professors whose duty it is to teach these sciences, and whose eminence in their respective subjects is too widely acknowledged to need any word from me, I would not venture to do more than indicate what bearing these sciences have upon the training of a mining engineer, and to what extent he needs their aid. The first part of a mining course usually consists of what is, strictly speaking, a portion of geology—namely, an account of the various forms in which mineral deposits are met with, the mode in which these deposits have been formed, and the various classes of dislocations and interruptions to which they are subject. These matters need dwelling on in more detail than is usually possible in a course of geological lectures; indeed, in some Continental universities these subjects are elevated to the rank of a separate science, and professional chairs have been devoted to it. The student has next to attack mining proper, and here he comes at once into a new world. He has hitherto been studying pure science; now he has to learn an art, and must, from the first, be taught to consider it in its trade aspects. All such subjects as prospecting, boring, shaft sinking, exploitation, haulage, winding, pumping, ventilation, and so on, have to be considered in their economic, as well as in their technical aspects. Of course, it is absolutely impossible to learn mining either from lectures or from books alone. Not very long ago I saw in a newspaper an advertisement from someone who proposed to teach mining by correspondence, and I could not help wondering how a mine would fare, the manager of which had been taught in this fashion. All that a lecturer on mining can do is to describe to his students the practice in various parts of the world, and the principles upon which it is based, drawing especial attention to those methods that have proved economically successful, and also whenever possible contrasting with them other systems that have proved failures or have been superseded by better ones. After all is said and done, mining must be learnt in the mine. A combination of practical work with lectures is the best way of learning, but then it is always preferable, whenever possible, that elementary lectures should precede the practical work, so that the student may know what to observe and how to observe it. After he has learnt all the pure science he needs, let him attend a course on elementary mining, and not till then let him go underground. Advanced lectures of a more specialised nature should then be attended (say) during two days a week, whilst the student is working in the mine for the rest of his time. Furthermore, there should be special short courses on such matters as mine accounts, mineral legislation, and mineral statistics. Mine surveying should be thoroughly taught in a course of demonstrations, in which the students themselves are made to execute surveys, if possible, underground, or, if not, at any rate, under somewhat analogous conditions. They should be taught to calculate and plot their own surveys, and especial attention should be directed to the calculation of quantities upon a systematic basis.

A branch of mining that requires special training is that of ore dressing, in which term is included all the mechanical preparation of minerals after they have been brought to bank, in order to fit them for the market. All methods of crushing minerals and of dressing them, whether the object of the process is to save the heavier portions as in lead dressing, or the lighter ones as in coal washing, are also included. This subject is best taught by laboratory demonstrations; a laboratory for this purpose should be fitted with various types of crushing machines, and with experimental jigs, shaking tables, &c., so that the student can test for himself the effect of various processes, and of various ways of carrying out the same process upon a given ore; there should also be facilities for assaying the products of the operations, so that the student can prove to his own satisfaction the value of his work. Properly conducted, such a laboratory course has immense educational value, in addition to the training it affords in the treatment of minerals, and a student who has gone through such a course will have a grip of his subject and an intimate knowledge of minerals, such as no amount of mere lectures or reading can give him. I am, accordingly, inclined to lay especial stress upon the importance of a course of practical ore dressing.

Finally, the mining engineer must have a good general knowledge of metallurgy. It is no exaggeration to say that nine-tenths of all the products of mines, whether coal or metaliferous, are intended to undergo metallurgical treatment. In fact, minerals are mined and prepared for that object. Unless the mining engineer knows exactly what the processes are by which the mineral he raises, will have to be treated, he is not in a good position to judge of the most suitable condition in which they should be delivered, and without such knowledge he is likely to produce an article less readily marketable than the man who knows what after treatment he is preparing his ores for. Obviously, therefore, the man who knows metallurgy is likely to get better prices for his products than the man who does not.

In addition, the study of metallurgy completes and rounds off his knowledge of minerals, and thus puts a finish on his technical education. The minor details of metallurgy are not, indeed, required, but a general knowledge is, and no man can be considered a really thorough mining engineer unless he is a metallurgist as well.

I have now laid before you, briefly, the main elements that should, in my opinion, compose the technical training of a mining engineer, and I venture to think that a man thus trained is in a position to take his place in a mine, and to be of some use from the day he enters it, although, of course, he will have to spend a good many years underground before he can attain to any mastery over his subject. It may be objected that such a training as I have sketched out will require a good deal of time. So it will. I do not consider five years any too much to devote to the study of mining engineering. I do not know of any profession that can really be learnt in less, and hold very strong opinions as to the injury inflicted upon the mining industry in every way by the admission into the ranks of mining engineers of men only partly qualified for their duties. Unfortunately, mining is, to some extent, a hazardous career, and chance plays a far larger part in it than in most other pursuits. Hence it may happen that an untrained man now and then finds himself in charge of so good a mine that all his ignorance cannot prevent its paying its way. I remember an instance in South Africa, where a certain mine manager had control of a very successful mine, and for a time enjoyed quite a reputation as a mining authority; yet all this gentleman knew about mining was what he had been able to acquire whilst following his former occupation of a ship's steward! Such things will occur as long as the duties and training of a mining engineer remain vague and undefined, but it is pretty evident that a clearer public opinion on this point is gradually springing up. One thing is quite certain, and that is that, in the face of the keenness of competition all over the world to-day, no mining engineer can afford to neglect any item of training that is likely

to help him in the struggle for existence, and that no mine can pay so well, in the long run, as the mine that is controlled by a properly qualified manager.

Do not think that I am taking too sordid a view of the mining engineer's duties; the sole justification for his existence is that he can make mining pay, and mining, I repeat, is a purely commercial pursuit. Accordingly as I have said, the mining engineer must be first and foremost a man of business, and must study science, not for its own sake, but for the profit in pounds, shillings, and pence that he can get out of its application.

If any of you are inclined to contract unfavourably such a purely utilitarian career with the pursuit of science for its own sake, I would ask you to remember that whilst the scientist passes his life in adding to the knowledge of mankind, the technician spends his life in adding to the stock of human comfort by his labours, and I venture to assert that of the two the latter object is at least as important as the former one.

## VICTORIAN GOLD MINING.

By THOMAS CORNISH, M.A.I.M.E., Author of "Our Gold Supply," &c.

DURING the last 14 years I have written and set forth a good deal of information as to the value of the Victorian gold fields through these columns and those of other papers. I have repeatedly pointed out that Victoria had yielded already from its partially-worked gold fields about £240,000,000 sterling, or more than twice the amount of gold produced by all the other gold-producing colonies put together, and that it was still deserving the attention of investors in legitimate mining enterprise.

Victoria has been severely handicapped in the race for fashion-able notoriety by the inaction of its own representatives in the colony, and here in England on the one hand, while serious misrepresentations have occasionally been made by irresponsible persons who have put themselves forward as authorities on Victorian gold mining. I have occasionally had to call attention to the misleading statements and misrepresentations set forth in prospectuses or circulars inviting subscriptions for capital for Victorian mines, or such persons who had no practical knowledge of the mines, or the difficulties to be encountered in developing the proposed under-

take. Victoria possesses quite enough sound, legitimate gold mining properties that can be acquired and developed at moderate costs, without undertaking grave responsibilities of draining extensive areas of country that will too heavily tax the patience and pockets of the British capitalists to be either pleasant or profitable.

In the series of papers that I have lately written on Victorian gold mining, I have already pointed out the extensive fields for future development both in quartz lodes and alluvial leads.

In the development of the alluvial leads, especially on the western lead system of Ballarat leading northward to connect with the leads from Beaufort, thence on to Clunes, Carisbrook, and the Loddon valley, a whole network of smaller tributaries or leads will be absorbed.

The drainage question is the one serious difficulty to be encountered in the development of any of the mining areas now held under leases over a large extent of auriferous country; and as I said in one of my late articles on the Maryborough leads that some local combinations ought to be formed, and the Government should be called upon to support a pumping scheme for helping to more effectively drain areas of country now held by companies that cannot stand the incessant strain on their capital to do the entire drainage themselves.

While it is very essential that capital should be devoted to developing legitimate mining enterprise in Victoria, it would be misleading to induce capital to be frittered away in a vain endeavour to overcome great difficulties by small means.

In the efforts that are being made to promote companies in the Ballarat and Maryborough districts, due consideration should be given to the water difficulties to be encountered. If the companies are formed with the idea that a small working capital will suffice, they will be mistaken. It is no use tackling the drainage of the rocks and drifts overlying the alluvial leads without providing ample capital and allowing ample time for development.

That some of the chances are good there can be no doubt, but ample capital must be provided to surmount the difficulties to be encountered in sinking the shafts and opening the mines.

The following report of Mr. Robert Allan, mining surveyor to the Mining Department, September, 1888, will give some notion of what had and has to be encountered on the main Avoca lead:—

The Golden Stream Company, Avoca (after overcoming the great difficulties which they encountered in sinking), have erected a powerful and efficient plant, and are now engaged in testing the continuation of the old Avoca lead in deep ground. The enlarged plan shows the position and extent of the ground worked, and the further continuation will undoubtedly be found along the Avoca Valley. The water in this mine is very heavy, two lifts of 22 inches are kept constantly going eight strokes per minute on 7 foot strokes. The returns obtained have not so far been very remunerative, but better yields are expected from the ground now being opened up at west end, the country there being intersected with quartz veins, the strike of which is considerably west of north.

The Frying-pan lead, which is east of the Avoca lead, takes a more northerly course, and has been traced from the shallow ranges to the south. I am of opinion that it will be found to extend in a north-westerly direction, and ultimately join the leads in the Avoca Valley.

The Homebush lead, east and parallel to the Frying-pan lead, has also been traced from its source (about 5 miles to the south of the Working Miners' Company), and has been proved very rich for the whole of the distance, and up to twelve months ago good results were being obtained from it at the northern end by the Working Miners' Company; but at this time, through a burst of sand and &c., their hydraulic shaft collapsed, and the whole of the drives were filled up with sand which necessitated the abandonment of their No. 2 shaft, and now all the works are carried on from the New North Homebush shaft, both claims being now amalgamated. At present an intermediate drive is being put in south from this shaft, and when connected with the old workings from No. 2 blocking will be continued. It is expected that this connection will be made in about three months. The water in this mine is also very heavy. They have two lifts—15 inches and 13 inches—constantly going on a 5 foot stroke at six strokes per minute. The trend of the iron on sand is a matter of conjecture, but I consider it most probable that it will continue on its present course up to about the bore in the Homebush Freehold, where it will probably junction with another lead, which, although at present untested, should prove to be the trunk lead of the district, and that after the junction the amalgamated lead will turn in a north-westerly direction, for the only outlet to the east is through a gap between Amity Hill and the Broom Hill range, and this gap has been bored, and no ground deep enough has been found.

That good payable ground exists along the run of deep leads from Avoca there can be no doubt, but to attempt to sink through the heavy drifts and rocks, and drain the large area of country on a small working capital will be futile and end in disappointment. The attempt should not be made with a lesser working capital than from £60,000 to £75,000 and it may require more.

The Langi-Lagan Mine, near Ararat, has lately lost its second shaft in the heavy drifts it has had to encounter, after seven and a half-year's work, which is, of course, very disheartening to enterprising shareholders, but they will no doubt make another effort to get down.

There are several positions on the course of the main alluvial leads in Victoria that are worth the serious attention of the Government and local bodies to help in developing by subsidising the companies that are, or may be, formed to sink the shafts and open the mines, or by guaranteeing a moderate rate of interest on the actual working capital expended in pumping and development. The places I allude to are the Western leads of Ballarat. The Avoca and Maryborough leads, at or near the Bet-Bet, the Charlotte Plains, the Ararat Deep leads, and at Laaneecoorie on the Loddon, which is on the outlet of all the main leads going northward. If at the five places mentioned very powerful pumping plants were erected and large shafts sunk, with actual working capital available for each mine, not less than £100,000 or £150,000, and to be kept as permanent pumping stations, subsidised by the Government, or a moderate interest guaranteed on the actual capital expended, then the great

drainage question of our alluvial leads could be handled with safety and large profits.

The several gold districts would be specially benefitted, new discoveries would be made, and the output of gold largely increased. A drainage rate where neighbouring mines were benefitted could be enforced, which would help the permanent costs of pumping at the main pumping stations. It will be futile for companies with small working capitals to attempt to effect the drainage of large areas of rock and drift water. In most of the main pumping shafts it will require two or three 20 inch to 24 inch columns of pumps to keep the water down to enable the alluvial leads to be effectually worked.

## PHYSIOGRAPHY AND GEOLOGY OF THE WADNAMINGA GOLD FIELDS, SOUTH AUSTRALIA.\*

By F. D. JOHNSON.

### PREFATORY.

"THE truly scientific method in the study of such questions at the present day is the reverse of that which was followed in the early days of geology, when after the observation of a few isolated facts, some great geological mind was led to a general theory, and humbler followers were only too apt to do mild violence to Nature in order to make her facts conform to it. It accumulates year after year a multitude of facts of patient observation, supported by studies with the microscope, and in the laboratory, avoiding general theories, and only making such deductions in regard to local conditions as are supported by the overwhelming evidence of facts." S. F. Emmons, on the geological distribution of minerals in the United States, at the "World's Congress" of mining engineers, Chicago.

This district comprises a small proportion of that north-eastern country so vividly described by a gifted South Australian authoress as "the silent sea." The shallow Pleistocene of the flats is shrouded in a pale grey garment of the fodder plants, well-known to Australians by their common names of "blue bush," "cotton bush," and "salt bush." On the higher lands, near its western boundaries, the cypress pine drops its cones, and on the ranges of its opposite margin mulga and stunted black oaks predominate among the flora. Between these limits in an area of about 400 square miles gnarled shrubs bloom perennially on the low, undulating ranges. The mallee, growing slowly with contorted limbs and hollow trunk, its spreading massive butt rising only a few inches above the soil, silently testifies that the rainfall is insufficient for a more vigorous plant life. I have found the roots of these stunted trees penetrating the crevices of the densest rocks in search of moisture below 100 feet from the surface. The umbrageous sandalwood attains a healthier growth than its fellows, and its trunk is sound, while it bears in its branches masses of the scarlet-petaled mistletoe, and its sides exude stalactites of sugary acid. The native peach grows luxuriantly in favoured spots, bearing abundantly after a season of rain. Spiny acacias fringe the watercourses, and in their shadows grow the native hop plants, geranium, mallow, and the raspberry, with its leafless branchlets.

The local elevation is but little higher than the country to the south, and the watercourses speedily lose their defined channels when leaving the ranges, and in those rare intervals when rain falls abundantly for a very brief period, their light burden of silt spreads over the plains. The schists have been denuded of every vestige of softer strata, and their innermost and densest hearts revealed. The alluvium of the flats is shallow, and its constituents are unsorted. The greater part is loam, through which are mixed angular quartz and shingle, nodules of ferromanganese and carbonate of lime, and small deposits of magnesite. The alluvium presents but a small remnant of the spoil won from rocks, and in its promiscuous mixture or want of arrangement by water, we are led to think that it has only accumulated since the climatic conditions of the present time have prevailed. I have not seen a trace of older drifts or fragment of fossil remains in any of the diggers' shafts sunk through these last deposits, but I have seen small button of that obsidian whose presence far inland is so puzzling, obtained from a watercourse among the shingle.

### Temperature, Rainfall, and Winds.

At the new head station of Oulnina, about 12 miles west from the centre of this district, in the four years ending 1892, the rainfall recorded averaged 11.825 inches per year, but Wadnaminga received rather less than two-thirds of this quantity during the same period. The reason for this difference in rainfall is owing to the contour of the highest ranges approaching the shape of a horseshoe, with its apex at Peparta Bluff, 400 feet above the plain. Under this eminence Oulnina station is built, and the rains coming from the north-west or west, invariably divide their aqueous freight about this point to carry it to the north-east and south. The winds most prevailing come from the north and the north-west, reaching their greatest intensity in the months of October and November. Winter is the driest, mildest, and most springlike of seasons, the temperature seldom falling below 50° Fahr. in the shade, rising about 5° higher at midday, and falling as night comes on; occasionally a frosty night is known. If the earth is slightly wet at this season, then thin ice will form on the water in open vessels.

The months of January and February are the hottest, the thermometer ranging from 95° to 112° Fahr. in the shade, and sometimes remaining at 80° to 90° all night, or until 4 a.m., but such hot nights are exceptional.

Violent storms are practically unknown, and the electrical storms of summer-tide are more frequently of brief duration and devoid of rain than otherwise.

The irregular distribution of the annual rainfall which I have noted here, is not phenomenal or peculiar to this district alone, and there is a general consensus of opinion on this point among those pastoralists to whom I have spoken about it.

### Geology.

Mining operations have not yet shown any faultings of the lodes. An enormous period of comparative quietness has reigned since the last of the lode fissures was formed, but during this interval there is abundant evidence to show that the seismic forces have been in operation throughout this region and beyond it, for in the schistose terranes there are numbers of shallow longitudinal depressions sometimes exceeding 2 to 3 chains in length and 6 to 8 feet in depth.

Water does not lodge in these depressions, even in the Pleistocene of the flats, where they are silted up and almost obliterated. I took the bearings of a great number of these depressions when riding over the country, and I found that they had approximately the same strike, their mean bearings being north 77° east. Had these subsidences in the earth's crust been made before the last of the lode fissures were formed, such places as these would have been points of least resistance, and in their lateral extensions the new fissures would have been formed. The nature of the rocks precludes the idea of subterranean erosion, and subsidence following such erosion.

Water level is reached at about 60 feet below the level of the plains. The analysis of water obtained at the southern part of the field gave the following results:—Total residue, 787.7 grains per gallon, consisting of sulphate, chloride and carbonate of lime, magnesia, soda and potash; anhydrous residue, 705.6; inorganic, 682.2. A sample taken in the northern portion of the same district yielded the following results:—Total residue, 1725.15 grains per gallon (anhydrous 1668.70, inorganic 1449.35) sp. gr. 1.017. The residue consisted of chloride, sulphate and carbonates of alumina, lime, magnesia, soda, and potash.

The schists consists of great bands of slate, lesser bands of sandstone, and small layers of limestone. All these sedimentary rocks have been folded into narrow corrugations parallel with the granite to ranges. As a general rule, every elevated range or ridge in the dense non-fissile arch of an anticlinal, and the converse the trough or synclinal, where slaty cleavage prevails, and building stone or flagstones may be quarried. Iron and lime are largely present in the composition of these crystalline slate and sandstones. Oxide of manganese forms a dendritic arborescence on the cleavage planes, and frequently the jointing presents a series of wavy and again like concentric rings in oxide of iron pigments. This last appears to the observer but a superficial veneer on the joint planes of the dense and crystalline rocks, but when we are enabled to study the arenaceous or more readily decomposed strata, we find these concentric rings penetrate the masses wholly, or excepting only the hard unaltered kernels of the masses. We thus learn several things about the conditions under which the rocks were resolved into crystalline schists. First, that the metamorphic agencies produced sufficient plasticity among the molecules to allow of the iron elements aggregating freely into concentric rings; and, secondly, that crystallisation operated rapidly enough to arrest each circle of iron particles at a distinct interval from its preceding one; thirdly, that the final shrinkage of the rock masses towards their centres of equilibrium produced such lines as exhibit the torsion of the rings. In the same rocks the original stratigraphical position or bedding planes are only made visible by weathering of exposed portions, and, similarly, have the decomposition agencies oxidised and made visible, the edges of these concentric rings within the rocks overlying the flanks of the ranges in a limited number of places, and apparently confined to the central or axial portions of those ranges in a thin layer of dark grey rock containing pebbles and angular fragments of shingle, without any appearance of sorting out or regular stratification being visible in a section of it, but intervals between each layer of fragments filled by fine grained aphanitic rock, lend at first sight a small resemblance to stratification here and there cracks passing down through it into the country rock beneath are filled with quartz. I have not noticed any point where this rock exceeded 10 feet in thickness, and its junction with the schists is clearly marked, although no line of division is present. It resembles that geological formation found over a great area of the northern country, and classified by careful observers as glacial detritus. Mr. H. Y. L. Brown, Government Geologist for South Australia, a gentleman whose researches in this matter cover a very extensive field, is of opinion that ice has distributed the deposits I have just described. There remains one fragment of sedimentary rocks of later age, and these constitute a horizontal crest of the highest ranges in the central part of this district for a distance of about 2 miles; they consist of an impure carbonate of lime with thin layers of highly ferruginous matter dividing it horizontally; they contain calcite and selenite in thin veins, small deposits of friable gossan, and marcasite bearing a trace of silver. Small veins of argentiferous galena penetrate these beds, but no deposits of any value have been found in them. These rocks appear to have had their origin in the bed of a stream that at one time carried a portion of the drainage of this region, and the conformation of this ancient channel is made plain in natural sections and by mining operations. The last have not shown a greater thickness of this formation than 70 feet, but fissures filled with calcareous rubble in the country rock under this formation have been followed down in mining here under a misapprehension of the true nature of the deposits now described.

Turning to the question of the origin of the lodes and their relative ages, I have found during my observations (these extended over a period of about four years) that the data I obtained was not involved, but exceptionally simple and convincing. We have four classes of quartz lodes that possess features that are distinct from each other, and three of these lode systems have originated in the following order:—The Great Barren lodes ("buck lodes"); the small auriferous lodes known as "indicators"; the auriferous lodes. The first—viz., the "buck lodes" of the mineral, are, undoubtedly, the most ancient. Before the metamorphic period of this region they were nearly vertical lodes breaking through horizontal strata. Their strike was north-east nearly, and hundreds of linear yards of these lode masses still remain preserving their original strike. There is some evidence to prove that the country rock surrounding them was not intensely hard. With the folding of the schistose terranes, these lodes were broken into huge longitudinal masses, and with their numerous "spurs" and wreckage were again firmly embedded in new positions in the sunken areas. If these lodes were once metalliferous they had parted with their contents before that epoch arrived in which they were wrecked, or some portion of their minerals would have been present in them today. By reason of the isolation of many of these segregated quartz masses from the influence of meteoric waters in their vitrification and environment (as they most frequently are found in country rock that is extremely close in texture, and away from fissure lines where water penetrates readily), we have a series of favouring circumstances that would preserve such minerals from dissolution and dispersion for an indefinite period of time.

In structure the quartz is invariably massive and vitreous in appearance, or it is of a milky colour. In one instance that came under my notice, a mass of this class of quartz, outcropping at the surface, had received a valuable addition of argentiferous ore by reason of a small vein of later age above the quartz mass releasing its contents into a pocket formed below the point of contact.

The next lodes in point of age are those that have assumed importance to the miner by their enriching—under certain limited conditions—those lodes of still later origin, whose planes may intersect them. These small lodes occupy shrinkage fissures in the metamorphosed schists. They strike obliquely across the arches of the anticlines to the south-east, and dip uniformly eastward. In our mining operations I have frequently found them cutting the great barren masses of quartz (buck lodes) of that primary lode wreckage which I have already dealt with. Their matrices are largely ferruginous quartz—sometimes a ferro-calcite. The amorphous quartz seldom contains gold in appreciable quantities. Those portions that are cavernous, or contain iron hydrates, will sometimes yield a little gold, but it is only in the deposition of their leachings from the last-named areas that these lodes attain importance.

This subject will be found explained to some extent in a previous paper—Vol. I, Part I, Trans. Australian Institute of Mining Engineers; "A Study of Certain Ore Deposits," by the author of this paper.

The last of the lode systems to be formed were those we know as reefs, that bear more or less gold in their matrices. All of their fissures break through the flanks of the narrow anticlines, and in their depths cleave all the previously-formed lodes that I have described.

Their dip at the lowest depths attained does not in any case exceed 43°, and is most frequently an angle below 30°. The most important of these lodes have approximately the same drive eastward. The matrix is almost invariably quartz of a highly crystalline nature, and often massive for some distance below the surface, a thin lamination of drusy quartz on each wall enclosing the central mass sometimes. Pyrite (marcasite) is contained in the gangue to the amount of 2 or 3 per cent; copper carbonate and specks of native copper only occur to a very small extent. Manganese wad and a spongy efflorescence of this mineral accompanies it in minute quantities. Calcite, limonite, and siderite occur between the laminae, and in certain places contain the greater portion of the gold contained there. This is more particularly the case where the auriferous deposit is a redistribution of secondary origin. Galena is the predominant mineral in all the lodes. In the carbonate of lime rubble that is sometimes a few inches deep on the footwall close to the outcrop of the lodes slugs or argentiferous galena are not uncommon. Corrosite containing about 8 ounces of silver per ton is present in patches in one lode, but the argentiferous minerals are too thinly distributed to allow of any profit in their winning.

The iron pyrites contained in the southern group of lodes seldom contain more than 1 or 2 dwts. of gold per ton, consequently they do not enhance the economic value of their gangue from a practical point of view. Two of the lodes in this last group have not been found gold-bearing, save for that minute amount I have mentioned that the iron sulphurite carry out secondary depositions of more or less value have enriched these practically barren lodes in certain lines. The first discovery of gold in this district was a deposit of this class, but the earliest and many subsequent adventurers failed to recognise this fact there and elsewhere also.

These secondary deposits are only found at the intersection of the small lodes belonging to that second series, in point of age, that I last described. This subject will be found explained to some extent in a previous paper—Vol. I, Part I, Trans. Australian Institute of Mining Engineers, "A Study of Certain Ore Deposits," by the author of this paper. One tolerably large group bears its auriferous contents and most of the minerals I have enumerated, in a certain well-defined channel only. This channel was defined at the outcrop by a conspicuous bulging of the lode, and its being auriferous only at this point. Following the "shoots" downward their gold contents were found to have drifted into patches unconnected by any threads of auriferous ore. Sometimes the laminae of the lode's selvage would bear a little gold, and again an aggregation of spongy particles and delicate filaments occupied a druse.

More frequently the metal sought rested in a nest of cassiterite, galena, and limonite, partly as free gold and sometimes investing crystals of quartz loosely, or adhering by a film of silica or siderite. In several instances I found small quartz crystals penetrated by specks of gold, the gold having probably been included while the crystal was in process of forming.

The northern group of lodes differ from those I last described in some of their characteristics. One lode was entirely covered by a few feet of soil, and barely appeared above the country rock. A large portion of its capping consisted of a highly auriferous hematite with small patches of galena distributed through it. At less than 100 feet downwards the gangue was wholly ferruginous quartz bearing upwards of 2 ounces of gold per ton. About three-fourths of the gold contents were invisible in tests made by the ordinary amalgamation processes, owing to the fineness of its particles. Having an easterly strike it dipped south-westerly at an angle of only 18° near the surface, falling to 32° at about 150 feet from its outcrop. In another instance, the lode material of cellular and ferruginous quartz with a good deal of its gold contents free or only found enclosed in iron hydrates, showed that its pyrites had decomposed, and in the yellowish sulphurous coatings of the layers or jointage of the lode there remained corroborative evidence of that portion of its history.

The fourth series of auriferous lodes are those filling the fissures in the eastern granite boundary of this district. These terranes show very markedly the passage of schists through the intermediary stages into granite. There are but a few noticeable points where the granite is undoubtedly eruptive. The remainder of this eastern margin for a distance of two or three miles represents a portion of the stratified rocks that have been converted into granite. The lode fissures have an irregular strike, but dip uniformly at a low angle below their horizon. The matrices invariably consist of quartz, bearing fragments and smaller particles of hematite, the last bearing more gold than other constituents of the lode. Copper carbonates in small quantities and at irregular intervals, giving a green coating to portions of the veins, while a little of the iron being decomposed reddens them also. Such gold as they contain is usually present in minute fibrous particles, that shrivel up before the blowpipe flame surprisingly.

(To be continued.)

## TIN TICKETING.

THE fortnightly ticketing for tin ores was held at Tabb's Hotel, Redruth, on Tuesday. Result:—

Mines	VALUES OF ORES SOLD BY EACH MINE.		Value. Tons cwt.
	Tons	Per ton.	
East Pool A	20 0	38 17 6	777 10 0
do B	20 0	38 12 6	772 10 0
do No 2	1 10	17 2 6	25 13 9
Dolex-h No. 1	18 0	40 7 6	726 15 0
do No. 1a	18 0	40 10 0	729 6 0
Wheal Grenville A	22 0	41 15 0	918 10 0
do B	14 0	41 10 0	581 0 0
South Frances United No. 1	14 0	38 5 0	535 10 0
do No. 1a	14 0	37 15 0	528 10 6
Carn Brea No. 1	13 0	32 12 6	424 2 6
do No. 1a	12 0	32 10 0	390 0 0
do No. 2	1 10	24 2 6	36 3 9
Wheal Bassett No. 1	13 0	41 12 6	541 2 6
do No. 1a	13 0	41 15 0	542 15 0
Tincroft	11 0	35 12 6	391 17 6
do	11 0	35 7 6	339 2 6
Killifretth No. 1	9 0	37 10 0	337 10 0
do No. 1a	9 0	37 2 6	334 2 6
West Kitty	13 0	41 10 0	539 10 0
Phoenix United No. 1	10 0	41 0 0	410 0 0
do No. 2	2 0	31 12 6	63 5 0
South Condurrow	7 0	41 2 6	237 17 6
	266 0		£10,282 7 6

AVERAGE PRICE PER TON, £38 13. 1d.	AVERAGE PRICES PER TON.
August 27	£37 13 0
September 10	37 10 10
September 24	37 17 10
	October 8, 13 1
	October 22
	38 13 1

\* A paper read before the Australian Institute of Mining Engineers.

## MEETINGS OF MINING COMPANIES.

### MOUNT JACKSON GOLD MINES, LIMITED.

THE statutory meeting of the shareholders of the Mount Jackson Gold Mines (Limited) took place on Monday, at Winchester House, Old Broad-street, Mr. ALFRED BARRETT (the Chairman of the company) presiding.

The SECRETARY (Mr. E. W. Ayers) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen—This is, as you know, the first statutory meeting of the company, and as there is no official business to be done, I propose to give you all the latest information we have received since the company was formed. The company was registered about June 18, 1895, on behalf of the West Australian Gold Fields Company, in accordance with an agreement with the original owners; but the shares were not offered for subscription to the shareholders of the Gold Fields Company until August 7, 1895, at which date the history of the company, as far as we are concerned, may be said to have begun. The property consists, as you are probably aware, of two leases—namely, Nil Desperandum, of 162 acres, and Balharry's Golden Temple, of 12 acres; total, 174 acres—situated in the Mount Jackson districts, about 60 miles north of Southern Cross, so you see we are comparatively near a railway station. As I find in most companies which are brought out by the West Australian Gold Fields Company, no time is lost in ordering machinery ahead, and, as in the case of the Mount Margaret Reward Claim, the machinery for this company was ordered, and, in fact, the bulk of it was in the colony before the shares were offered for subscription, and, as you will see by the extracts from letters and reports I shall presently read to you, is now well on the way to erection. Now, gentlemen, I cannot tell you more than we know ourselves, so I think the best thing I can do is to read extracts from letters, &c., received from time to time from your colonial director, the Hon. H. J. Saunders, and the manager, Mr. Black. In a letter, dated July 27, Mr. Black says:—"Am now prepared to turn out stone in quantity with levels started. Stone at present to date, 500 tons." And again:—"Am fencing in dam 200 feet by 400 feet. Rain filling pot-holes." A copy of a letter, dated July 31, was sent to the financial papers here, so I presume you have all seen it. The most interesting part is as follows:—"Sample B I consider good, coming from a soft formation between two large reefs, making a body of stuff taken together 9 feet 8 inches thick, which will crush 2 ounces or over per ton." And on August 10 he writes:—"I received a letter from the Postmaster-General stating he has granted a fortnightly mail service. I am leaving for Southern Cross to-morrow to see about machinery. Put in application for dam site, 1,000,000 gallons. A letter from Mr. Saunders, dated August 16, says:—"The winding machinery, purchased from Messrs. Martin and Co., is now well on the way to the mine. The machinery from Messrs. Fraser and Chalmers is also nearly all at Southern Cross, and I have accepted a tender at £21 per ton, including boiler." That is pretty cheap, and he had great difficulty in getting it done at that price. In a letter addressed to the West Australian Gold Fields Company, dated August 23, he also says:—"The winding machinery is all on the claim. Mr. Black expressed himself as being highly pleased with the developments, and he anticipates that the yields will be steady and regular, and it will not be long after the battery starts work before the mine should be on the dividend-paying list. Now, gentlemen, here is a little extract which really does not concern us as directors, but it shows what is thought of your mine in the colony. It appears that the West Australian Gold Fields Company, on Mr. Saunders' own recommendation, instructed him to endeavour to purchase the vendors' share, and in this same letter he says:—"I am working quietly with regard to securing the vendors' share in this property; but as they have implicit faith in the value of the mine, I have to go about the matter very carefully." Now, since this letter was received, Mr. Saunders has cabled as follows:—"Mount Jackson—The vendors will not agree to sell shares." So, I think, that however unsatisfactory this may be to those who are trying to buy the shares, we may consider it a very satisfactory sign that the vendors, who took a large proportion of their purchase consideration in shares, will not part with them, notwithstanding the wiles of our worthy director, Mr. Saunders, thus proving that they have a very high opinion of your property. In the same letter Mr. Saunders goes on to say:—"It is rather a pity so much timber was sent out for bedding, &c., as Mr. Black informed me that there is an abundance of magnificent timber close to the property, which is admirably suited for all mining purposes." On October 8 our solicitors received the following cable from their agents in Perth:—"Survey complete; the title is good in the name of Saunders," which may be considered quite satisfactory, I think. A letter dated September 6 from Mr. Saunders says:—"The winding machinery has all been delivered on the property, and the other machinery is well on the way from Southern Cross—in fact, a great deal of it should be delivered by now;" and again, "Mr. Black is making every effort to get the machinery erected without delay." The last letter received from Mr. Saunders was dated September 13, and it was enclosed one from Mr. Black, dated September 7, which will give you the developments up to that date. Mr. Black says:—"For the past fortnight the 100 feet level A shaft has been driven a further distance of 17 feet south; total distance of driven level, 52 feet; reef now 3 feet 6 inches, in good stone, looking well. Brace or B shaft nearing completion; will shortly resume work in this shaft to connect with level 100 feet from A shaft. In E shaft, for the past fortnight, have started crosscut 75° west; driven 15 feet. Am resuming sinking at 200 feet level, and with crosscut 100 feet west; 15° for battery supply of water. Erecting whip on this shaft for portable engine to work from. Have started battery foundations and reservoir dam for return water from settling pits to enable crushing water to be re-used if boilers should be ready to crush by the New Year. Have discovered suitable granite for building in boilers' foundations, making large saving in bricks required. And on September 18, the date of Mr. Saunders' last letter, which I think contained nothing of material importance, we received the following cable:—"The mine is looking very well, the erection of battery in full swing. That is all we had up till this morning. We have simply got ordinary reports, the same as these are. A letter has been received from Mr. Saunders, dated September 20, enclosing a report from Mr. Backhouse, the West Australian Gold Fields engineer, dated September 6, in which Mr. Saunders says:—"Enclosed please find copy of Mr. Backhouse's complete report on this property, which has been drawn up from his recent inspection. He reports very favourably of the property, and you will also see that he has a good opinion of the capabilities of Mr. W. F. Black, the manager. A large quantity of the machinery has been delivered on the property, and the balance is well on the way. If things go well there is a likelihood of crushing being started about Christmas." Mr. Backhouse goes into some details, which are pretty much the same as I have already read, and he says in his general observations:—"Workings are sufficiently opened up to start crushing operations if battery was erected, provision having been made to hand stone from A and B shafts, when ore at grass exhausted, but shaft C requires to be sunk another 50 feet to obtain water.—Shaft A: The reef has been proved strong, and continues to a depth of 152 feet, when a good body of stone exposed 3 feet wide, good strong faces in both drifts, and all the way in shaft; the stone in this shaft was not good from the surface, and has not improved in quality in depth; the gold most probably dipping south-east toward B shaft, so expect to get better stone as south-east shaft continues.—Shaft B: Here both reefs, water reef and cross reef, carried down to depth of 107 feet on underlie, and gold showing fairly freely through it, generally samples taken yield 1 ounce to the ton, but I think I can say without hesitation that all the stone will crush 2 ounces, as generally, quantity of gold visible to the eye warrants this assertion, and I also think that on driving on the cross reef we shall get some exceptionally rich stone. In proximity to this shaft the west stone has been

raised, and so conclude that here we shall get on best stone.—Shaft C. This shaft has been sunk to a depth of 100 feet in country the reef line No. 3, it passed through reef at about 30 feet, probably leaving same in hanging-wall side of shaft; as this is only a subsidiary line, there is no necessity at present to prove it.—General conclusions. The mine is looking quite as well as expected. I do not think we shall have any difficulty in obtaining 3-ounce stone for some time after we have the crushing plant erected, also that future developments will prove the mine more valuable than present developments justify. The management is being carried out in an able and economical manner by our present manager, Mr. W. F. Black, and so recommend that his services be retained, being a competent practical mining manager." Well, gentlemen, that is all we know from the letters we have received, so, as I said before, we cannot tell you any more; but in order to give you the very latest information we wired Mr. Saunders a few days ago, giving him the date of this meeting, and asking him for the latest particulars. The telegram has not yet come to hand, but as soon as we get it we shall send it to the papers and you will all have an opportunity of seeing it. Now, gentlemen, having read you all these letters and cables, there is no more business before the meeting, which is now concluded, unless any of you wish to ask any questions, which I shall be glad to answer to the best of my ability. (Applause.)

On the motion of Mr. BARRETT, seconded by Mr. HECKSCHER, a cordial vote of thanks was passed to the Chairman and directors, and the meeting separated.

### THE BREMNAES GOLD COMPANY, LIMITED.

An extraordinary general meeting of the members of the Bremnaes Gold Company (Limited) was held on Tuesday, at Winchester House, for the purpose of considering, and, if thought advisable, confirming resolutions previously carried, authorising the increase of the capital of the company to £50,000. Mr. HODGKINSON presided.

The SECRETARY (Mr. Harrison-Smith) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—In proposing the confirmation of the resolutions which have been read to you by the secretary, I have a few words to say to you, because we are always anxious to keep in touch with the shareholders and to give them as much information as possible. Since I last had the pleasure of addressing you, our solicitor, Mr. Verden, has been out to the Bremnaes mine, and I shall presently ask him to make a few remarks to you as to what he saw, and as to whether he is able to confirm what we said to you at the last meeting. We certainly have been a long time prospecting that portion of the Bommel Island. It takes a long time to find the best point to work at, but I think that now we may feel assured that we have the cream of the whole position. It is unnecessary to repeat that our property is three miles long by a mile wide, but I may say that since our last meeting the manager has made considerable progress. In a few minutes I shall read to you an extract from a letter received last night, and also a cable he has sent us in view of this meeting, so that you should have the very latest information. A test crushing has been made. We urged our manager to give us crushings rather than assays. People have lost confidence in assays; they want actual tests. The manager accordingly this month put through 50 tons, and they produced 21 ounces, or 8 dwt., to the ton. Some people may turn up their noses at 8 dwt., but, if we keep our stamps going night and day, it will give us a large dividend. If you compare this average with that of the Rand, you will find that the Rand mines do not average much more, a good many of them falling below that figure. The other day I saw in the report of a company that the assays went up to 8000 ounces. Well, we have ore in the offices of the Bremnaes Company that would run to the same figure if we chose to make it, but the mill test is the true one, and from time to time we shall get Mr. Dawe to send us mill tests. The stopes are to be kept for large crushings later on; at present he only puts through what he takes out in opening up the lodes by drivings, sinkings, and risings. By degrees he is increasing his mining staff, taking only picked men. He is at work on the dam, having let that contract for about £61. The dam is to be raised 6 feet, which will give us an ample supply of water all round. Before asking the solicitor to speak to you, I will read you a short extract from a letter received last night from the manager:—"We have broken more stones with gold from Fladenas this week, some of them containing 50 per cent. of gold. You shall see these when I come over. There is one stone that I would not sell for £20. I need scarcely say we do a great deal of work on the outcrops. We have now found rich gold in three different places on the outcrop within a distance of 100 feet." That is the point where two prospectors were working when I was there, and the alluvial gold exhibited at the meeting came from that spot. It struck me as being a very rich position, and one that ought to be fully developed, and I advised Mr. Dawe that he should work up the gully. What he has found has been in a small way, but when he gets his sluices to work it ought to be done on a large scale, as we have great hopes from that point. It is within 40 feet of the Fladenas. The letter goes on:—"We are taking surface cuttings from a short distance below the panning pond up to the place where you saw the decomposed stuff taken." Then we received the following cablegram from Mr. Dawe yesterday:—"Section 4. The development of the mine fully justifies the expectations which have been formed.—Section 5. The upper workings all points in gold-bearing quartz, producing stone full of visible free gold.—The lower workings. From the surface workings broken pieces of quartz very rich in free gold; likely to turn out very valuable. Daily increasing mining staff." The Chairman concluded by calling upon Mr. Verden to address the meeting.

Mr. H. VERDEN said: To follow the Chairman so shortly after his inspection, and to attempt to add to the information so fully and so lucidly given to the shareholders last month, is an act of presumption from which, as a modest man, I shrink. But the Chairman himself has put the task upon me, and bade me check his impressions against my own. I am not a miner, and can only speak from the view of a business man. This was not my first visit to the mine, but the appearance of things has much changed since I first inspected them. If the proprietors would only visit the property for themselves, and see what they have for their money, I am sure they would be astonished. Had the old shareholders known what they were parting with, I doubt much if they would have allowed the property to be starved for capital, or permitted others to enter into their inheritance. You have auriferous lands covering an area of 2000 acres, with mining rights in perpetuity, including 1000 acres of surface freehold. In this area you have 14 miles of lodes, all visible at surface; a large extent of buildings, including houses for managers and workmen; and a large complete modern plant, capable of treating 2000 tons of ore per month. This property has cost altogether about £80,000; and how has it been treated? At no time in the old company's history have more than 20 miners been employed. During the last three or four years 10 to 12 miners only were engaged, and in 1893 only five miners. As well might you expect to make profits on a factory costing £80,000, worked by a dozen operatives, as to expect profits from such a property with dozen miners. Based upon the experience of the past yields of ore treated, you have a right to expect a return of from 6 dwt. to 9 dwt. to the ton, at a cost equal to 3 dwt. It is, therefore, a question of working capital and miners only. Put on 100 miners and you get a profit, roughly, of from £18,000 to £20,000 per annum on a capital of only £50,000. I am satisfied that if justice is done to the mines good results must follow, and I cannot help thinking that the time is not far distant when this company will find it easy and advantageous to form subsidiary companies to purchase and work some of this enormous property. You will remember that the Chairman at the last meeting made a point of the value of the property recently purchased. In my opinion that property was worth buying, if only for the convenience arising from joining the divided possession of the old company, and making one complete block. But the new property has already proved to be

rich in gold. During my stay a wonderfully rich stone was found on the surface heaps at Fladenas, a broken portion of which I have for your inspection. We examined the upper working and found excellent quartz, some of which was broken and showed visible gold. You will remember the Chairman's reference to the alluvial deposit on the new property. I was desirous of testing some of this dirt, and accordingly some was extracted from parts not previously tried. All our pans showed colours of gold, and in one was a small string of gold, which I also have with me. The old man spoken of by the Chairman has continued his work of washing on tribute, and some of his results are contained in this bottle. I have also a small pebble spotted with gold, found by the old man on the first day of my visit. It appears to me that this deposit is worth working, although the quantity is probably not great. Its chief value is found, no doubt, in the clear indication which it gives of the presence of gold-bearing quartz in the immediate neighbourhood. There is no higher ground than yours, from which it could have been washed down, and the ore from which it came will probably be found between the mill and Fladenas shafts, and it is now proposed to join these two shafts by a level, which it is hoped will cut this rich ore in depth. The work was partly done by the old proprietors, and about 350 feet remains to be cut, the cost of which will be about £150. It is worthy of mention, too, that this new property contains a lode which has always been the pet of the Government experts, who have prophesied great things of it. Work was being pushed on in Hodgkinson's lode, where the lode continues to look promising. In the 400 feet level a large stone was broken, which on examination showed several spots of visible gold. I should weary you if I stated in detail the many points of experiment where visible gold was found. In short, it is found all over the property—north, south, east, and west. Next to gold, water is the most valuable, and of this element the company has really a monopoly. So far the quantity has proved sufficient, but an increased output will require an increased supply, and this is obtainable by increasing the height of the dam, a work upon which the manager is now actively engaged. When I had finished with the mines I made an inspection of the books of account in the office, and it appeared to me that the method adopted was all that could be desired, both for clearness and accuracy, and the arrangements with the workmen are at least economical. The men work 60 hours per week for about 18s., to 20s.; labourers get 14s.; but most of the work is done by contract, and paid for by measurement. In this way the company certainly gets value for its money, and with far less supervision than would otherwise be required. The cost of sinking shafts 13 feet by 5 feet is 20s. per foot run. Levels 6½ feet by 5 feet cost 10s. per foot run. The width of the lodes between the walls (varying from 4 feet to 5 feet) is stopped for 6d. per foot super, and all these prices include explosives. The comfort of the workpeople is considered in the provision of dwellings for families and of a large reading-room for the men, who appear to be well content with their work. One word as to the value of cash for trading. The company, by paying cash, is now saving 25 per cent. on its coal bill. Explosives have been reduced from 250 krs. to 180 krs. per kilo, and the saving on other goods is in proportion. In conclusion, let me say that two things at least are required, and should be forthcoming—first, ample capital should be provided, and I hope the shareholders will at once subscribe the £10,000 now voted; and, second, a little patience must be exercised. Ample ground must be opened, the stoping must be continuous, and not fitful; so that the mill can be kept continuously employed. I expended a short time after my examination in taking some 30 photos, with the aid of an Eastman Kodak camera. These pictures give some idea of the external appearance of the property to those who may not have had the advantage of seeing it. (Applause.)

The CHAIRMAN then proposed the confirmation of the following resolutions:—"That the directors be, and they are hereby authorised by resolution of the board, to increase the capital of the company to £50,000 by the creation of 40,000 ordinary shares of 5s. each." "That the directors be, and they are hereby authorised to dispose of such shares when, and upon such terms and conditions, not being less than par, as they may consider expedient."

The motion was seconded by Mr. HOLST, and carried unanimously.

A vote of thanks to the Chairman terminated the proceedings.

### THE WHITE ROSE GOLD MINING COMPANY, LIMITED, WITWATERSRAND.

The statutory meeting of the shareholders of the White Rose Gold Mining (Limited) was held at the Cannon-street Hotel, on Wednesday last, the chair being occupied by Mr. ALFRED JONES.

The SECRETARY (Mr. R. Lawrence Spicer) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—You are doubtless aware that this meeting is called in accordance with the Companies Act, which states that the first meeting of shareholders shall be held within four months from the date of the formation of the company. Of course, it cannot be expected that in so short a period we should be in a position to give you exact data as to the value of your property. No time, however, has been lost in commencing operations. The company was registered on June 27 last, and on August 15 a cable advice was received that the transfer of the property was completed. The number of shareholders who have subscribed in London is 170, and in Paris 93. The number of shares subscribed for is 57,038, the vendors share representing 46,962, and there are in abeyance 1000, making a total of 105,000, and leaving in reserve 20,000. The amount of called up capital is £42,780 5s., leaving un-called £14,257 15s. You will thus see that we have £30,000 working capital, and a reserve of 20,000 shares. Having thus secured the property, the next duty of the board was to obtain a good and reliable manager. Your directors at once placed themselves in communication with Mr. G. A. Goodwin, who brought the Durban-Roodepoort to such a successful issue, and is now accomplishing equally good service for the United Main Reef, with the result that he nominated his cousin, Mr. George Goodwin, who also has had Durban-Roodepoort and other experience, and in whom your board feel sure they have an able and straightforward manager, and one who seems confident of bringing our company in a short time to a dividend-paying condition. Mr. Goodwin has recommended us to open up the mine thoroughly, and at the request of the board he is busy preparing plans and estimates for developing the property and providing the necessary machinery. Mr. Goodwin is evidently at one with the directors for proceeding to open the mine with energy, and yet with due regard to economy. Mr. Goodwin says in his letter under date September 7: "That the main incline shaft is filled with water to within 70 feet of surface, but as far as he has been able to get samples on the eastern side of main shaft from the various parts of the workings, the full average over plates will come out 8 dwt., and this at only 45 to 60 feet from surface. On western side of main shaft nothing has been done on surface. It will be observed this estimate of 8 dwt. is upon the plates, and without any consideration of what the tailings may show by cyanide treatment, it will thus be seen that reckoning cost of production at 5 dwt., a very outside estimate, a profit of over 50 per cent. is shown. Mr. Goodwin recommends our putting up a 20 stamp mill, a cyanide plant, and an engine with sufficient power to admit of driving a further 10 stamps if required. In conclusion, your board feels that we may congratulate ourselves as shareholders in having what promises to be a thoroughly payable property, and a competent engineer to develop it, and bring it long amongst the dividend-paying mines. If there are any shareholders who desire to ask questions I shall be pleased to answer them to the best of my ability.

The CHAIRMAN, in answer to a remark from the body of the Hall, said:—"You are aware that it takes something like from six weeks to two months to communicate with the other side, and even now the agreement with our manager is only just going out, although he has taken the matter in hand, and is now vigorously going to work.

During the time previous to the selection of a manager the property was in the hands of a caretaker. There is no question that when we have got the cyanide treatment into work we shall find that we are on level in regard to results with most of the companies in the Rand. Of course, it is more speculative to estimate what will be in the tailings, but, taking the Rand generally, the tailings are from 5 dwts. to 6 dwts. in value, and cost to obtain something like 2 dwts. or 3 dwts., so that if ours run to the ordinary figure you may take our property as being a 10 dwts. or 11 dwts. mine. (Applause.) We are very glad to have met the shareholders here to-day, and I trust that we shall become firmer and faster friends, and, what is better, that we shall before long see our concern in a most prosperous condition. (Applause.)

A vote of thanks to the Chairman, heartily given on the motion of Mr. BURRELL, seconded by Mr. WRIGHT, terminated the proceedings.

### JOHANNESBURG GOLD FIELDS, LIMITED.

The sixth ordinary general meeting of the Johannesburg Gold Fields (Limited) was held at Winchester House, Old Broad-street, E.C., under the presidency of Mr. R. A. TIESEN.

The SECRETARY (Mr. George Christie) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I am glad to say we are met to-day under very much better auspices than for years past. This company has had more than its share of troubles and difficulties, and from some letters we have received of late it would appear that some shareholders are not aware of the great difficulties the directors have had to face in conducting the affairs of this company. I am not going to dwell on the past, however; I will simply take you through the events of the past year, and show you a glimpse of the future which, I think, is opening up for this company. Three events have happened during the past twelve months, every one of which was important for the future of this company, and has helped us to overcome past difficulties. I will give them in their chronological order. The first is that we have been enabled to compromise a certain debt owing to us by the Development and Investment Company of over £2400, and as it is we have made a loss of about £300. But if you recollect, for a long time past, we have taken this debt as almost irrecoverable. If I tell you to-day that we have had to deal with three trustees, the official receiver, and I do not know how many lawyers, I think you will agree with me that we have come out fairly well. We collected about £2100 for this debt, and with that money we were able to liquidate claims which had been made against us, and to put our house in order generally, so much so that we have now, after paying all our liabilities, a fair amount at the bank. Point No. 2 is the sale of the Bethlehem block. Well, to enable you to understand fully the position, I must tell you two things. In the first instance, there is nothing so dangerous for a company as to be in want of ready funds. If you recollect, last year I told you that a very awkward corner in the history of this company was only turned by the personal advances made by your directors. The second thing is, in the olden times of the Rand we used to look upon 10 claims as a very snug little property, which we could work with advantage. We have since found out that we have not to look on the Rand for rich shoots or pockets or nuggets; we have there a large body of low grade ore, which pays extremely well if worked with a large amount of capital and very economically. All the companies recently started or amalgamated with existing companies have provided a working capital of £100,000 or £150,000. It would be folly for us to spend even half that amount on a property containing 10 claims only, because if you spend such a large amount of money you must have a large area of ground to work. These two reasons have induced us to sell this property for cash. We have received £10,000 for these 10 claims, which is, I think, as good a price as I have ever heard of on the Rand for ground which, after all, is not fully proved. These £10,000 are at present in the hands of our bankers, and will be handed over to us shortly. What we are going to do with this amount we have partly stated to you in our circular. We must, first of all, make provision for some claims which will fall upon us in a year's time under our tree-planting arrangements. We must set aside for that some thousands of pounds. We shall then propose to spend some thousands of pounds in prospecting the Rietfontein Farm, which has never before been explored properly. We know there are reefs, but they have proved of very low grade, and it remains to be seen whether we shall find anything worth working under present conditions, which are very different from what they used to be. Under the circumstances, I think it is very judicious for us to sell these 10 claims. I now come to point No. 3. For the last two or three years I have told you that the aim and policy of the board would be to keep your properties intact and free from encumbrances. Well, we have done so until we found an opportunity of turning them to good account. We have given you notice that we have made arrangements for working the Ziervogel property. The East Rand has lately been developed very much, and it would be impossible for us to sit still for ever. We have on the Ziervogel property half a dozen or more reefs which are outcropping, but which are very low in grade. We now know, also, that we have the deep levels of the Main reef series at a workable depth; but in both cases you will agree with me that a large amount of working capital would be required to work them economically and on a paying basis. The best and simplest course would have been for us to have come to you and asked you to give us £100,000, but I am afraid you would have thought us a little exacting and, perhaps, extravagant. In any case, we have tried to find some better means, and have found them. We have been fortunate in finding a firm in Johannesburg and here who know as much about the Rand as anybody, I should say, who know all about our property, and who are willing to risk a large amount of working capital to see if they can turn the Ziervogel property into a paying concern. When we had this proposal the first idea that struck us was that there would be half-a-dozen of our most important and prominent shareholders who would say, "We would have done it on the same terms." We, therefore, agreed with the firm that our shareholders should have a right to participate in this deal at par. It was not easy to obtain such a concession, but we have done it. All the shareholders in this company have a right to take new shares in the new company at par, and they will thereby secure an additional interest in the concern. I want it to be clearly understood that no shareholder is forced to take any new shares; it is entirely optional. If you do not, you will retain an interest in the Ziervogel Mine through the shares which this company will hold, which will amount to nearly one-third of the whole capital of the new company. Therefore, the old shareholders will benefit by this proposal, and anybody who takes shares in the new concern will, of course, have an additional interest. These are the three points which I have to put before you. They are all very important for the future of this company. A special meeting will follow the present one, when you will be asked to confirm the proposal. One thing remains for me to mention, and that is the Rietfontein farm. We have been very much ridiculed for having made arrangements for planting trees. We are not to-day in a position to tell you exactly what may come out of it, but we are very hopeful. I may tell you what the Rietfontein directors have said in their report. They estimate their trees at 30s. apiece. They are one year ahead of ours, and if their trees are worth 30s. each, I leave you to judge what may be the value of ours in two or three years' time. We have 230,000 trees growing—some of them four years old, some two and three, and some planted last year. This is the statement I have to make to you, and on the whole I think it is not a bad year's record. (Hear, hear.) Referring to the accounts, the item which will most interest you is the expenses. The directors' fees amount to £500. You are aware that the directors have worked for a number of years without fees, and on this occasion they are only drawing half the amount to which they are entitled. They have also waived absolutely any claim for arrears, but in future, if the company's position should warrant it, they will, of course, be entitled to draw their full fees. That is, however, a matter for the future. The £210 for general

charges arose in this way:—The Ziervogel liquidation had dragged on for three years, and the liquidator had only an allowance of 50 guineas for expenses, and we thought we should do well to assist him by paying something towards his expenses, and we made him this allowance of £210. We have, however, been recouped for that very handsomely by the number of shares which have fallen into our coffers—namely, over 2000 shares. I shall now be glad to answer any questions you may have to put, and I beg to move the adoption of the report and balance-sheet. (Applause.)

Mr. C. J. TAPP, in seconding the motion, remarked that when he recollects that last year the shares of the company were down to 1s., and the company was heavily in debt, and knowing how Mr. Tiesen, at great personal inconvenience to himself, had found money to save the company from being wrecked, he thought the shareholders had every reason to be satisfied with the present position. He had gone on buying until he had become, he thought, one of the largest shareholders in the concern. He had bought some at 1s., and tens of thousands at 8s. and 11s. Mr. Tiesen had got the company into a first-class financial position, and had made an excellent bargain for them. He thought they ought warmly to congratulate the directors on what they had done, because many companies, under such circumstances, would have been allowed to go to the wall.

Major COTTON supported the view of Mr. Tapp, and referred to the assistance the directors had given to the company in the past, when he was a member of the board.

The CHAIRMAN, in answer to questions, said shareholders would be entitled to an allotment of one share at par in the new company for every three held in this undertaking.

The resolution was then put and carried unanimously.

The retiring director, Mr. P. Comiskey, was re-elected to his seat on the board, on the motion of the CHAIRMAN, seconded by Mr. JAMES WILSON. The auditors, Messrs. Cooper Bros. and Co., were also reappointed.

An extraordinary general meeting then followed, in accordance with notice.

The CHAIRMAN moved:—"That an agreement, dated October 9, 1895, and made between the Johannesburg Gold Fields (Limited) of the one part, and Messrs. G. and L. Albu of the other part, be and the same is hereby approved, and that the directors be authorised to carry out the same, subject to such alterations and modifications as they may deem necessary." He explained that the object of the agreement was to carry into effect the proposal he had referred to for the sale of a portion of the Ziervogel mynacht belonging to the company to Messrs. Albu.

Mr. TAPP seconded the motion, which was carried unanimously. The proceeding terminated with a vote of thanks to the Chairman and directors.

### SIERRA BUTTES GOLD MINING COMPANY, LIMITED.

The 51st half-yearly ordinary general meeting of this company was held at the Cannon-street Hotel, on Thursday last, the chair being occupied by Mr. F. TENDON.

The SECRETARY (Mr. John Saul) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I think it was in 1882 that I had to inform you that a snowslide had carried away a portion of the Hanks mill at the Sierra Buttes, and about three years afterwards I also had the unpleasant task of telling you that the Sardine dam had burst its barrier, and had done considerable damage. From that time we have gone on without any mining casualty till a few weeks ago, when a fire destroyed the shaft at our new Whitlock Mine. Fortunately, it was the old shaft, and the main damage done was the stopping of the works for a time. The difficulties have now been mainly overcome, and in about another fortnight we shall be able to resume stoping operations at that mine. The occurrence was particularly disappointing, because we might have had a little more definite information to give you had it not occurred, and it was also annoying to find that the accident was entirely due to carelessness. It appears that one of the miners, who had to see the ore run out from the shaft by the adit level, was in a very draughty place, and, therefore, he naturally had two lights. I say "naturally," because he put one candle in what he considered a secure place, and used the other one for his own purposes. Frequently this candle was blown out. We cannot free the mine captain entirely from blame, because he should have known that the man was working in a draughty place, and, instead of having candles, he ought to have had a lantern. Moreover, Mr. Johns justly observes that he not only blames him for the consequences of the accident, but also for the waste of candles, because, in mining, candles are an important item. The man forgot all about the candle he had left alight, and about two hours after he had gone it had burnt down to the socket. Probably he had left it in a very dry place with the result that a fire occurred. The draught carried the flame rapidly towards the shaft, and they went up that shaft as if it were a chimney. As I said before, it was fortunately the old shaft and the pecuniary damage is not very great, the main misfortune being the delay that it necessitated. Our last information is that the men will in all probability be at work within a fortnight. They are now taking the water out. We had what I call the satisfactory intelligence on Wednesday, that they estimated the clean-up for the month from 15 stamps at £8000. Now that would mean, I should think, about £8 a ton, for I do not think the 15 stamps could treat more than 1000 tons in a month, and £8 a ton will leave a fair profit for working at the Whitlock Mine. The developments up to the present time at the Whitlock Mine have been eminently satisfactory. The workings not only carried ore all the way down in the Whitlock shaft for a distance of 270 feet, but they also carried ore down in the new shafts some 400 feet, where for the whole distance from the adit level to about 50 feet below the 150 foot level, the ore was good. There the vein was broken by the same flat vein that has broken the main Whitlock shoot at the surface, or rather where the adit tunnel enters the lode in the Whitlock shaft. In this case, however, the breaking of the vein is not an injury to our property. On the contrary, to a certain extent, it is a great advantage, because the only effect it has had upon the vein has been to thrust it forward, and we have found the vein beyond the thrust is solid and good, and with as clear an indication of permanence as before the break, while as the break is crossed by another vein, whatever value there may be in that vein is so much to the good. In the 150 foot level below the adit level the vein may be taken—the paying part of the vein—at about 400 feet in length, and in the level driven out from the 250 foot level the vein has already been developed for nearly 200 feet, and they are still in ore. So that in the Whitlock we have the vein proved by two shafts going down, and it is only reasonable to suppose that since we have good ore in the two levels we have a large body of ore between these two levels. As the samples taken up to the present time average about £8 a ton, and as the crushing of the mill for the month is estimated at about £8 a ton, I think we have good reason to expect that in the Whitlock Mine we have a property that will repay us, and repay us well, for the time it will cost us. Up to the present time—or rather, to June 30—the expenditure on that mine amounted to £35,471, including the purchase money. It is to the Whitlock Mine, so far as I can see, that we have mainly to look in the future. For up to the present time the developments in the other property we have bought—the Mammoth Mine—are not satisfactory. That mine was bought very cheaply for a very small sum of £5000, and up to the present time its development has cost us, including the purchase money, £10,379. We have developed it by continuing the level that we found when we were there, and by driving a deep tunnel to reach the lode, then driving along the lode, and afterwards making a rise to the upper tunnel. If you read the directors' report, the impression made upon you, I should think, would be a very satisfactory one. The Mammoth Mine was bought

at a £5 proposition. The men who sold it did not claim that it would yield more than £5 a ton, but they calculated that it could be worked very cheaply. That was also the impression made upon our minds when we were there, and also upon Mr. Johns. Assays were taken as fairly as possible of as much of the lode as was laid open by veracity I still place entire confidence. The man who made the prospects told me he must have taken 1500 samples from the lode, did not show visible gold. Then we sent our most experienced mine captain to stay there some days, and take his own samples right through, as fairly as he possibly could. This he did with much more care than it was possible to exercise when I was present. He weighed the pulp and he weighed the gold, and you will see that in many places it assayed £7. In the deep adit, when struck by the tunnel, the lode was of great width. It seemed to be wider below than in the upper tunnel—in some places 30 feet wide, and it appears that the gold is disseminated more or less through the whole of those 30 feet. If there were only a little more gold in the ore this would be a splendid property, but unless there is more gold in it than we have at present in that tunnel it will be a great disappointment. Mr. Johns has always been a little fidgetty about how this rock will come out in the stamp—how it will stand the test of stamping. He is afraid it may not turn out as well in the mill as when crushed by hand and then tested in the horn-spoon. In one of his visits, subsequent to the letters which appear in his report, he had the ore taken from four or five different places—about 200 lbs. in weight of each—sent to San Francisco, to be crushed there in a mill and assayed. He seems to have been completely upset by the result of the assay. When he left the Mammoth he wrote in good spirits; but the tone of his letters completely changed when these assays had been made. Now, I think the matter is of sufficient importance for me to read you an extract from his letter of September 21, which we received on October 5. He says:—"You are well aware from the various reports sent you that the ore that has been developed from the main tunnel in the Mammoth Mine so far is of too low a grade to be profitably milled." The main tunnel is the one where the lode is reached in depth. "The ore above the upper tunnel is hardly of sufficient quality to warrant the erection of a mill at the present time, and there is no certainty, of course, that the ore above the said upper tunnel will yield the estimated value placed upon it." By this he means that, although the ore in the tunnel may have averaged £6 all the way through, it does not follow that the same figure will be maintained to the surface. "I have," he continues, "lately had samples of 200 lbs. each taken from the upper tunnel, the raise from main tunnel, from a cut into the vein where cut through to the main tunnel, and from a cut into the vein from the south bottom drift. The results are not satisfactory, and my advice is not to erect the mill at present, but to complete the ditch, put up a compressor, so as to work power-drills, and a pump, should it be necessary, and sink the shaft 200 or 300 feet deeper, and test the vein at this greater depth. The property is certainly a very promising one. The vein is large, and there is gold all through it, and recent developments on the mother vein have discovered very rich veins where the surface and upper workings did not have the favourable indications we have. The general opinion of those who have visited the Mammoth is that we shall certainly develop a big mine by continuing the works downward." Now, you are in possession of the facts just as fully as the directors are. So far as we are concerned, we had not the slightest hesitation how to act. We have instructed Mr. Johns to sink the shaft, to put up a compressor and a five stamp mill, and until that mill has been working for some time I refuse to change the opinion that I held and still hold—that the Mammoth will prove a very valuable property. Still, however strong my conviction may be, you must be put in possession of the facts, and I have not the slightest doubt you will thoroughly endorse the policy we are pursuing. I am very glad I warned you 12 months ago that the Uncle Sam was not looking well. I was very sorry to have to warn you, but if the mine is not looking well you ought to know. From that time to this the only favourable development we had been able to make is in a drift called the Miner's Drift. Up to the present we must have laid open about 120 feet of ore to a breadth of about 8 feet, and all was of very good quality—about £10—such as we were formerly accustomed to in the Uncle Sam. They are now going to make a rise, and as they have good ore in the level above, we hope they will have a good body of ore there, and that our returns from Uncle Sam will be good for some few months. You shall have the latest information we have about these works. Lately we heard that the ore had pinched in the Miner's Drift, and was only 2½ feet wide, but still worth £10 a ton, and as the telegram received on Wednesday, says:—"No change in Uncle Sam," we conclude the shoot has still continued, and it is possible that we may have a good and profitable body of ore there, which we can work with the poorer ones, and that fresh discoveries will be made. You see by the plan what an enormous extent of ground remains unworked, but up to the present time we cannot find a large body of good ore. The vein is there, but in California it seems that the comparatively vertical shoots are but little better than the flat veins in the irregularity of size, and the contents of gold. The other main development we are making is in sinking a shaft below the main level, and that shaft at a depth of 150 feet contained a shoot, but a somewhat poor one, and the driving in each direction has not developed any body of ore that we consider satisfactory. We are now going to push down another 200 feet and see what may yet be discovered. Now, I hope the shareholders will not feel disheartened because I have been told, amongst other things, of a mine not so very far from our Mammoth Mine, that did not develop at all satisfactorily in the upper workings, and was consequently abandoned time after time. It was, however, taken up once again, and I believe that at the present time it is producing £40,000 worth of gold per month. At all events, I have come to this conclusion—that mining in California, if you can only buy a mine at a proper price, and can get a vein of good appearance and prospects, is about the most profitable form of industry that one can go in for; but it certainly does not yield a fortune. We cannot complain of Uncle Sam. The last six months it produced 10,823 tons of ore, yielding on an average 2s. per ton, and costing 1s. 6d. Since we bought it the mine has produced 10,494 tons, of a money value of £193,253, and has actually given us up to the present time a profit of £79,000, of which we used £12,000 in the development of the property, have given you £56,866 in dividends, and have put £10,000 by. So that in six years it has yielded twice the money that it cost. (Applause.) With regard to the Buttes, it has lived on from month to month, and now it is living on from week to week—(laughter)—and the Eureka is a little better, for it is going to live on through the winter. This is the last news we have of the Eureka. Now, let us see what our position is. When the Buttes pays to the Eureka the small balance that it owes on the purchase of the new mines it will have a reserve left up to June 30 of the present value of £4000; and to pay you the dividend we are paying you to-day we had to draw upon the old balance to the extent of £476, and if I thought we were going to keep on drawing upon the old balance I should have to ask you to be satisfied with half the dividend you are receiving, because the Buttes must put money by. But as we have every reason to believe the Whitlock will be a good earning property, and that the Whitlock and the Uncle Sam will more than earn the dividend of the Buttes, we not only pay you this dividend, but fully expect to pay you the same dividend in six months' time. With regard to the Eureka, after paying this dividend, it will have cash, including what is owing by the Buttes, and investments, of the present value of £38,283; and, therefore, as the Eureka has so large a reserve, we have not hesitated to pay you the same dividend as you have had now for a long period, although to do so we have had to draw upon the reserve to the extent of £1669. As you were willing to have money put by out of your profits when things looked well, we shall not hesitate to use a portion of that money

they get by to maintain equal dividends when things are not looking so well, unless we see perfectly clearly that the bad state of affairs is going to continue, of which you will have warning in ample time. The Chairman concluded by moving the adoption of the report and accounts.

Mr. F. M. PHILLIPS seconded the motion, which was carried unanimously.

The CHAIRMAN then moved:—

That a dividend of 8d. per share, free of income-tax, be and is hereby declared on the Sierra Buttes Mine shares, payable on the 25th inst.

Mr. WOOD seconded the motion, which was carried unanimously.

The CHAIRMAN then moved:—

That a dividend of 8d. per share, free of income-tax, be and is hereby declared on the Plumas Eureka Mine shares, payable on 25th inst.

Mr. FELL seconded the motion, which was carried unanimously.

Votes of thanks to Mr. Johns and the officers of the company in California, to the secretary and officers in London, and to the Chairman and directors, terminated the proceedings.

## NEW HAURAKI GOLD PROPERTIES, LIMITED.

The statutory meeting of this company was held last Saturday, at Winchester House, Mr. HENRY WILSON (the Chairman) presiding, Mr. W. J. LAVINGTON (the secretary) having read the notice calling the meeting.

The CHAIRMAN said the shareholders had been called together in order that the directors might explain the exact position of the company's property, and the progress that had been made in connection therewith, as well as to tell them the very favourable reception the company met with when publicly launched. The capital was a small one, a first issue of 200,000 shares having been made out of a total of 400,000 shares. All those shares were now fully paid—that was, if the last call had been responded to—and in this connection he would draw attention to the important fact that it was proposed to amalgamate a portion of the property with another mining sett, and form a subsidiary company, and that only those people who had paid up all their calls in the parent company would have the opportunity of exercising their privilege of applying for shares in the new company. The shareholders would probably remember the prospectus which the company issued. It had occurred to him and to many of the gentlemen with whom he was associated that as a prospectus it was the most modest document that ever emanated from any board of directors. There were merely four lines devoted to the position of the property, its extent, and its possible value; the remainder was composed of statements made by experts in whom they had absolute confidence. The meeting would, therefore, not be surprised when he told them that for the 200,000 shares which the directors had to allot they had a great many more applications than they could possibly satisfy.

Now, as soon as the allotment of shares took place, which was on August 1, the directors had to inform the manager that the company had been favourably accepted by the public, and that he could commence operations, which consisted of surveying the ground, taking out his sections, and formulating plans for future procedure, and his programme must, of course, be sent to the directors for approval. When he (the Chairman) told the shareholders that not only had that important work been accomplished, but that registration was also affected between the date of allotment and September 30, he thought they would agree that Captain Hodge, upon whom the responsibilities of local management devolved, had established a very satisfactory record. The principal procedure determined upon was to drive a Deep Level with the view of intercepting the South Tokatese portion of the company's property, and also any intermediate veins or reefs there might be. The mouth of the adit was commenced in the West Try Again section of the property. It had been carried on rapidly and successfully, inasmuch as a lode had been cut by Captain Hodge on his way to the South Tokatese lode, which showed gold by the ordinary pestle and mortar process. At all events, they had found gold in that drive a little sooner than they expected. The property originally comprised in the New Hauraki consisted of 161 acres freehold. Being freehold, it was exempt from all Government interference, and they could develop it as they liked, without being compelled to comply with the conditions which usually attached to mining leasehold property. The next section of their property was the West Try Again. While Captain Hodge was occupied in the work of developing the West Try Again and the freehold lease, the South Tokatese, he was keeping a watchful eye over the shareholders' interests. There was an adjoining property, called the Try Again, with which he had been familiar for some time, and, naturally he was interested in the success of that property. With the object of protecting the interests of the shareholders in the New Hauraki Gold properties the directors had acquired that mining sett. It had already been tested in a very satisfactory manner, and at the extraordinary general meeting which would follow, they would show what the level in No. 3 section at James' reef had already produced in the form of gold. The Chairman concluded by asking Mr. Lane to address the meeting.

Mr. LANE said that in purchasing mining ground it was necessary to ascertain whether the ground was in an auriferous belt, and, next, whether the reefs found therein were productive. In the case of the New Hauraki properties a very large amount of development work had been done; reefs were discovered, and many thousands of feet driven thereon. Samples of quartz were taken from the property, which had been assayed with the following result:—The first assay, from a sample of 4 cwt., produced 19 dwt., 14 grains of bullion, the gold being 4 dwt., 22 grains, and silver 14 dwt., 16 grains; the second assay was 4 dwt., 2 grains, the third 4 dwt., 22 grains, and the fourth 3 dwt. As the samples were only taken from a depth of 50 feet from the surface, the directors consider that a very satisfactory result. By energetic action on the part of Captain Hodge, he secured the Try Again property, the object of which was to drive a level from the gully under the workings of the New Hauraki, or what was then called South Tokatese. That would drain those workings to a depth of 180 feet. In order to enable them to utilise the workings in the New Hauraki property, it was stated in the prospectus that it would be necessary to drive a level 180 feet; but it struck Captain Hodge that it would be very much better to obtain the adjoining property, Try Again. That had been obtained at a very heavy cost; but he believed the cost would be insignificant to the results they would obtain from that property. By acquiring the Try Again and West Try Again they would be able to avail themselves of the workings from the Try Again into the New Hauraki 56 feet below the present workings, and from the West Try Again 180 feet below that. Therefore, the advantages of obtaining those properties would give them much more tangible results. In making the 180 feet drive on the New Hauraki, a reef had been cut which ran through the Try Again and West Try Again properties. Every foot driven on that reef had produced gold. The properties they proposed to acquire consisted of 15 acres, and by this acquisition they would secure the advantages of driving their levels at a much lower depth. The adoption of the proposition to be made at the extraordinary general meeting would result in giving the New Hauraki a considerable amount of working capital. They had already £25,000 of working capital, but the proposition, if passed, would give them £20,000 more. There were 80,000 reserve shares, and he thought it would be unwise to attempt to utilise those shares in any shape or form. The directors proposed to form subsidiary companies when the various portions of their enormous property were shown to be of value, but he would suggest that they should let this ground to people who would feel disposed to come forward and offer a certain sum of money for the purpose of prospecting, and if they found it advantageous, then to purchase. It was impossible for this company, with the capital at its disposal, to develop the whole of the property. He thought their plan should be to interest the shareholders in the New Hauraki by making some return, and by the proposition to be made they could clearly show that a dividend was very near.

The CHAIRMAN added that eight or ten days ago samples were received which no doubt came from the No. 3 section of the Try

Again. These were sent for assay to Messrs. Johnson, Matthey, and Sons, assayers to the Bank of England, who certified to a yield of 8261 ounces fine gold per ton of 20 cwt. Of course, the directors did not expect to get such returns from the ore; they would be satisfied if they only got 800 ounces, 80 ounces, or even 8 ounces to the ton.

An extraordinary general meeting was then held for the consideration of the following resolution:—

That the directors be and they are hereby authorised and empowered to promote a company with a nominal capital of £50,000, divided into 400,000 shares of 2s. 8d. each, having for one of its objects the acquiring from this company of the properties known as Try Again and West Try Again, and to sell and transfer the same to such new company on the terms contained in the draft agreement hereinafter mentioned, and to remunerate any person or company for services rendered or to be rendered, for placing, underwriting, or guaranteeing, or assisting to place, underwrite, or guarantee, any of the shares in the capital of such new company, and in and about the formation and promotion of such new company, and for effectuating these purposes that the directors be and they are hereby authorised to enter into and carry into effect an agreement which has already been prepared, and is expressed to be made between this company of the one part and the Success Gold Mines (Limited) of the other part, a draft whereof has for the purpose of identification been endorsed with the signature of John Burder Batchelor, the solicitor of this company.

The CHAIRMAN, in moving the adoption of the resolution, said the West Try Again and the Try Again when united would embrace an area of over 15 acres. Beyond all question, the whole of the ground was auriferous.

Mr. LANE, who seconded the resolution, said it was his own suggestion to secure Try Again and work that and the West Try Again as one mine. It was originally the Success Mine, and, according to Government reports, very large returns had been made from it, and since then from Try Again, all at about the same depth. All the veins and reefs discovered there had proved extremely productive. He was in a position to state that all the shares in the new company would be taken up; in fact, if any of the shareholders in the parent company did not care to take up their proportion he would willingly do so.

The resolution was carried unanimously.

Mr. LANE stated that he had cabled Captain Hodge asking whether he would approve of the promotion of a company to acquire the properties known as Try Again and West Try Again, and the reply he received was as follows:—"It has my approval. I estimate the worth of the mine much more than when we started operations. The workings promise to develop large ore bodies east, west, and intermediate. Opening payable ore reserve. The future prospects of the mine promise great results."

A vote of thanks to the Chairman closed the meeting.

## JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY.

The annual meeting of the Johannesburg Consolidated Investment Company was held at Johannesburg on September 26.—Mr. S. B. JOHN in the chair.

The CHAIRMAN said: Gentlemen.—The duty I have to perform to-day, as Chairman, is greatly lightened by the highly satisfactory report which it devolves upon me to deal with. The report in itself places the position of the company's affairs fully before you, and it is little that I can add thereto, except by way of comment. You will have noticed that the capital of the company has been increased since last year to the close of our accounts from £350,000 to £800,000, which has resulted in a premium of £334,156 3s. 10d. In November last, when the London directorate was established, and the capital increased by an issue of 35,000 shares at a premium of 10s. per share, the directors stated in their circular to the shareholders that the premium derived therefrom would be carried to the reserve fund. This, you will notice, has now been done, and we have thought it only right to treat the premium of £1 10s. per share derived from a further issue of 138,000 shares in connection with the purchase of the South African Trust and Finance Company upon the same principle, and the entire premiums derived from these two issues of new capital, amounting to £334,156 3s. 10d., have been carried to reserve, and the directors have thought it desirable to augment this by £65,843 16s. 2d. from undivided profits, raising the reserve fund to £400,000, equal to half the capital of the company. You will not fail to observe that the creation of this very large reserve fund is in addition to the distribution of dividends during the year amounting to no less than £192,800; and I think that if our accounts stopped there you would not hesitate to accord us your congratulations on the results of the year's operations. In addition, however, to this very satisfactory result, we carry forward in the shape of undivided profits the very large sum £396,429 4s. 10d. Adding this to the reserve fund of £400,000, we have no less than £796,429 4s. 10d. of reserves, in addition to our capital of £800,000. This, together, makes our resources £1,596,429 4s. 10d. I think that you will admit that this places the company in a strong and most satisfactory position, especially when we consider that the result now before you has been arrived at practically during a period of six months. I think that you will agree with me that it is probably one of the most remarkable in the history of companies, at least in South Africa. When the new capital was issued, in November last, we had one very difficult proposition to deal with, and that was the question of founders' shares, which are now considered as an unsatisfactory feature on the balance-sheet of any company, and in order to remove which we opened negotiations with the holders of 17,000 of these shares, and they at once recognised the difficulty which their existence might create in the progress and prosperity of the company's business, and in January last, when the shares were only 10s. premium, the directors made an agreement with the holders of these 17,000 shares, carrying founders' rights, to extinguish their rights for an allotment of 25,000 fully paid-up shares, and, as the report now tells you, this option has been exercised, and we have secured the surrender of the rights of the remaining 8000 shares upon similar terms, and I have the pleasure to inform you that these rights will now be finally extinguished. Our report also refers to the acquisition from Messrs. Barnato Brothers, upon most favourable terms, of the valuable agencies held by that firm, and from which we have derived a large income, and which we think we can predict, with confidence, will be increased. Having placed to the credit of profit and loss account the revenue derived from this source, we have thought it only right to debit profit and loss account with the par value of the 10,000 shares, and the dividend accruing thereon, and this, you will notice, has been done. As regards the assets of the company, we have taken every care in valuing them, and are confident that our estimate of the same will be more than realised. Of course, in a company such as this, we must at all times have assets of a more or less fluctuating character; but thus far the fluctuations have always been on the favourable side, and we see no reason to anticipate that our assets will realise less than we have valued them at. On the contrary, we have every confidence that as our various investments are realised they will reflect very favourably on the credit side of the profit and loss account. Our first principle is to satisfy ourselves that the properties and assets we purchase are intrinsically sound; so that if times of depression arise—which are almost unavoidable in the development of a new country, in which a large element of speculation must exist—we can watch these fluctuations without apprehension that the real merits of our properties are in any way affected thereby. As the report states, it is our intention to remove from the valuable site in Commission-street the present Barnato Buildings, and in their place we propose to erect one of the handsomest buildings in Johannesburg, a portion of which we shall occupy, and the other portion we propose letting, and we anticipate from the outlay to derive a handsome return. I cannot refer without gratification to the appointment we have made of Mr. G. W. Starr as our mining engineer. It is needless to comment on that gentleman's high reputation and ability, as they are already sufficiently well known. We have been subjected to some criticism for not having declared a larger divi-

dend than that which we now recommend, but we decline to believe that this criticism represents the views of the shareholders. We who have administered the affairs of the company, and have to guard the shareholders' interests, feel that the best and only policy to pursue is one of building up a very large reserve fund and retaining large resources on hand to enable us to more effectively deal with the great propositions which are constantly arising in connection with the development of this country, whose riches are the topic of conversation throughout the habitable globe, and we are satisfied that the confidence with which European investors are placing their money in the development of this country is amply justified. Gentlemen, I have nothing more to add, except that business continues of a very promising nature. I will not venture to predict what may be ahead of us; but I may say this, that I see nothing to warrant the opinion that our prosperity will be other than continuous. Of this I feel assured that, as far as precaution and experience go, the resources of the company are well and safely employed, and we shall certainly not allow the success of the past year in any way to diminish our care and watchfulness over your interests. I will now move the adoption of the report and accounts, and confirmation of the dividend at the rate of 40 per cent. per annum on the paid-up capital of the company to all shareholders on the registers at July 31, as already announced.

The Hon. JAMES TUDHOPE seconded the resolution, which was unanimously carried.

## BLUE HILLS.

A 16-weeks' meeting of Blue Hills' adventurers was held on Friday.

The accounts showed a loss of £1148, and a total balance against the mine of £1378.

The CHAIRMAN (Mr. W. Pike) regretted that the improved prospects of the last meeting had not been realised, owing to difficulties in working. There were indications of a better state of things arising before long.

Captain J. RICHARDS reported that Letcher's shaft had been sunk 6 fathoms, and was at present 12 fathoms below the 100. A good trip plot was cut at the 100. They were driving north of east, so as to intersect the lode to the north of some gossans recently passed through. They expected to intersect the lode in about a month, and would then drive on the line of the lode until the first shoot of tin was passed through. He hoped that would be during the coming quarter. The back of the 80, from which they had been raising nearly the whole of their tin, became exhausted after the last meeting, and they turned their attention to the bottom level. Unforeseen circumstances occurred which completely threw them behind in tin sales, and caused the loss to be greater than was anticipated. The lode in the present bottom varied in value from £25 to £30 per fathom. He hoped that things would look much brighter when they intersected the shoots of tin in the 100. Although the lode in the bottom was not what they would like it to be, he had no doubt that it would maintain in depth the average—i.e., 1 ton of tin per fathom. They had spent £2000 in necessary dead work. He would recommend that the 100 east be continued as far as possible, and the driving of the 90 west to engine shaft. If that was continued they would get on to a shoot of tin equal to anything they had got in Blue Hills. These two, with the work at Letcher's shaft, could be worked for £300 per month, independent of any tin. Any tin got or profit arising from tributaries would go to reduce that amount.

Mr. BARTLE: Will the £300 be in addition to the present loss?

Captain RICHARDS: It will include all the costs.

The CHAIRMAN, speaking for holders of two-thirds of the shares, said they ought to confine their attention to pushing on the end at 100 east to get under the bunch of tin, and to getting the shaft sunk so as to be ready to start when that was found.

Captain RICHARDS said that course would minimise the loss.

The CHAIRMAN said the committee would consider the captain's proposals at the next meeting.

Mr. J. ROWSE said the opinion of some shareholders favoured the driving of the 90 west under Penhall's.

On the motion of Mr. J. WICKETT, seconded by Dr. WHITWORTH, a call of 5s. per share was made.

## WHEAL AGAR MINE.

A four months' meeting of shareholders in Wheal Agar was held last Friday, Mr. R. L. HATTERSLEY presiding.

The accounts showed labour cost, £132, and total debits £187. The arsenic sales realised £173, and the total credits were £211, leaving a credit balance of £24. The arrears of call were £1065, arrears on relinquished shares £160, and the total balance against the mine £424.

The accounts were adopted on the motion of the CHAIRMAN, seconded by Mr. H. TREMBATH, and it was decided to take proceedings against shareholders in arrear of call.

The CHAIRMAN, after particularising the various attempts to arrange meetings between themselves and East Pool, said they had had a meeting on the previous day. In the first place they could not get East Pool to make any proposal, and then Wheal Agar, after retiring, proposed first that East Pool should pay £200 per month towards the cost of pumping, Wheal Agar to pay the cost of keeping the engine and pumps in repair; this arrangement to be in force until the end of East Pool's lease, unless either of the two mines should decide to wind up, in which case it was to terminate after six months' notice. The second proposal was as to selling, and in regard to this they said they would not sell the plant because they preferred to work by themselves as soon as times were favourable. Then, as to amalgamation, they pointed out that in East Pool there were 6400 shares and in Wheal Agar 4025, a total of 10,425 shares. They proposed that East Pool should have two thirds of those shares, and Wheal Agar one-third, and then if there was any cash in hand after paying liabilities Wheal Agar should pay her proportionate amount to make an equal amount. East Pool committee absolutely declined all the proposals. They asked them what they (East Pool) had to propose, and all they had to offer was £100 a month on the first proposal, and that only for 12 months. East Pool committee then said that they would not take Wheal Agar at any price, unless Lord Roberts would allow them to work the mine as they liked. He presumed they meant that they would work the engine, and not the mine. They would not increase their offer of 600 shares, and declined to amalgamate except on these conditions; that was just what they offered in June, so that East Pool had made no advance whatever. (Hear, hear.) They came down there desirous of making some arrangement, and he did not think they had been asking anything unreasonable. No one could, however, suppose that it was reasonable for East Pool to offer them 600 shares for plant which had cost £100,000. East Pool committee threw out many threats as to how they would enlighten Lord Roberts and the public as to their generosity, but when they were asked where their generosity came in they could not answer. (Hear, hear.) They had not seen any sign of that generosity. At the meeting East Pool committee suggested that Agar, East Pool, and Lord Roberts should each pay one-third of the cost, but he did not see why Lord Roberts should be asked to pay anything at all. (Hear, hear.)

Mr. A. S. BROWN thought the best thing to do would be to stop the engine at once and tear up the pitwork, make a call of £3 a share, and go back east and sink Wheal Fortune shaft. They could take the engine down there, and he believed it would be a good thing.

Mr. JOHN PERMEWAN criticised the manner in which the mine had been worked, and said he believed a large number of the local shareholders had relinquished, not because of lack of funds, but because of the way in which things had been done. Wheal Agar

had been a terrible mistake, and under the present regime it was useless to go into Cornwall to ask for money to work it.

Ultimately Mr. HAMILTON proposed:

That provided East Pool will contribute £175 a month towards the expenses of working Wheal Agar engine for a period of not less than five years, the adventurers will keep their engine going and in good working order, after that time the water charges to be left to arbitration, provided always that Wheal Agar should be continued working.

Mr. A. S. ROWE seconded, and it was carried unanimously.

Mr. BROWN moved that in the event of their rejecting that offer, the engine be stopped in ten days, unless the committee otherwise determine.

Mr. WILLIAMS seconded, and it was carried.

A further resolution was carried unanimously, offering the engines and plant to East Pool in the event of their not accepting any of the previous for £12,000.

It was understood that a further meeting would be called at the end of about two months to consider the question of resuming operations or otherwise, and a vote of thanks was accorded the Chairman and committee.

## FINANCE CORPORATION OF WESTERN AUSTRALIA, LIMITED.

An extraordinary general meeting of shareholders in the Finance Corporation of Western Australia (Limited) was held on Wednesday, at Winchester House, under the presidency of General BATES, for the purpose of considering and, if thought advisable, passing resolutions authorising an increase in the capital of the company, and directing the division of £10 shares in the company into 10 shares of £1 each.

The SECRETARY (Mr. Wiggington) read the notice convening the meeting.

The CHAIRMAN said: Ladies and gentlemen—We have called you together to-day to ask you, if you think fit, to pass the resolutions which the secretary has just read. We hope it has not inconvenienced you to attend, and, in any case, I do not think I shall detain you long.

This corporation was started 12 months ago. The directors and their friends subscribed the necessary capital, and after a time—

although we had many difficulties to contend against—we managed to bring the ship into harbour, with the result that the original shareholders received their 30 per cent, as was agreed upon. (Hear, hear.)

Next, we issued a further capital of £50,000 for additional business, which was all subscribed. We still went on with the business, and, after unremitting attention, we again succeeded in bringing the ship into port with a very fair cargo. This cargo we now propose to divide among the existing shareholders at the rate of 50 per cent. per annum. (Hear, hear.) The next point is the proposed splitting of the existing £10 shares into shares of £1 each. Of course you are well aware that a £1 share is more marketable and more easily realised than a £10 share. The next resolution is that the capital of the company be increased from £50,000 to £200,000, in shares of £1 each. In regard to the additional capital, I may mention that we now propose to issue £50,000. The original shareholders will have the first opportunity of subscribing for these shares in the usual proportion. Those that are not taken up, and remain unallotted, we propose to place on the market at a premium of not less than half-a-crown, which will, of course, go to the benefit of the shareholders. (Hear, hear.) The corporation have reliable mining engineers as agents in Western Australia, who have already secured for us many rich and valuable properties there. In addition, we have secured properties in the Umtali district of Rhodesia, and we feel that we only want additional capital to make this corporation as great a success as many of those companies which we read of in the financial papers, and whose shares are now at a very high premium. At least, nothing shall be wanting on the part of the directors to use every endeavour in the future, as in the past, to make this company a great success. (Applause.) The Chairman concluded by moving the following resolutions:

1. That each of the £10 shares in the capital of the company be subdivided into ten shares of £1 each, and that the shares resulting from such subdivision be numbered from 1 to 50,000.

2. That the nominal capital of the company be increased from £50,000, divided into 5,000 shares of £10 each, to £200,000, divided into shares of £1 each by the creation of 150,000 additional shares of £1 each, and that such additional shares, and any of the original shares at present unissued, be allotted by the directors to such persons at such times, and on such terms (not being less than par), as the directors see fit.

Mr. WALES said: Ladies and Gentlemen—I beg to second the resolutions which have been put forward by the Chairman, and, in doing so, I should like to corroborate in every way the remarks that have fallen from his lips as to the corporation. We have had very small beginnings and we have been successful. We have worked very quietly and steadily, and the properties we have dealt with have not been taken up without the most serious consideration on the part of the board. In fact, the time and attention we have devoted to matters of that sort have been much more than usual with companies of our kind, and so far as the future is concerned, we are quite ready to give as much care and attention to the business of the corporation as we have in the past. (Applause.)

The CHAIRMAN, speaking in answer to Mr. Bonnard, said that while it was proposed to increase the capital of the company to £200,000, the directors only intended to issue £50,000 immediately.

Mr. BONNARD said another point he wished to understand was with reference to the extra capital. Did he understand that by raising this they had some business on hand by which they thought this extra capital could be remuneratively employed? Was it with a view to extending their business, and because of their having something particularly favourable in front of them? If so, the shareholders would like to hear something from the Chairman to that effect; otherwise there had been no reason given.

The CHAIRMAN said it was in view of the extension of the business they had now before them. They had acquired a very large area of property situated in the well-known Hannan's Find, which had been satisfactorily reported upon by some of the leading mining experts of the day, and which must undoubtedly prove a source of very large profit to this corporation. They had also secured an exceptionally valuable property at Bamboo Creek, which was a working mine, and making most satisfactory returns, all the stone going 4 ounces to the ton. The last crushing of 100 tons yielded over 4 ounces of gold. They had also an interest in a very valuable property in the White Feather district, from which he had no doubt the corporation would derive a great profit. They were also largely interested in other first-class properties in the north-western district, and several other valuable properties under offer, which, with increased capital, they would be able to make very profitable to the shareholders.

A SHAREHOLDER: Have you properties in the Rhodesia district at all?

The CHAIRMAN said that in South Africa also they were negotiating for 127 claims in the Umtali district of Rhodesia, and the directors saw no reason why this corporation should not be as successful as those quoted in the City financial press with shares at a very high premium. At all events, nothing would be wanting on their part to make the corporation a success.

Mr. BEDFORD asked if the present call would be £50,000 over and above what had been called up?

The CHAIRMAN: Yes; just so.

Mr. BEDFORD: And the present shareholders will have the right to subscribe for this £50,000, and any further money you want before opportunity is given to others?

The CHAIRMAN replied in the affirmative. In answer to another question, the Chairman said the shareholders were, with a few exceptions, now holders in the present issue. They had changed their priority certificates into ordinary shares.

Mr. BEDFORD: I understand there is no preference in the 20 per cent?

The CHAIRMAN: They are very few, and they will be paid off.

Mr. BONNARD asked if, after paying a dividend of 50 per cent., there would be a reasonable amount of profit still remaining to be

carried forward. To pay 50 per cent, and absorb all their profit would, he thought, be unwise.

The CHAIRMAN replied that 50 per cent. would not absorb all their profits.

Mr. BONNARD further asked if the directors had heard from the shareholders not present as to their views with regard to the proposal.

The CHAIRMAN said they had a large correspondence, some of the letters being very favourable. There were no dissentients. Mr. Thomas Pegg wrote as follows:—"I think it is a very wise move to split the shares up in pound shares, and I have no doubt the company, and, of course, the shareholders, will benefit by the alteration. I shall be unable to attend the meeting, or I should certainly support it." Mr. Francis Kidgell wrote as follows:—"Re £150,000 extra. You modestly commenced with £50,000, just sufficient to test your tact and ability as financiers at the commencement; but now, as you perceive unlimited scope for the judicious investment of your capital, it seems to me that it is absolutely indispensable that you should possess the additional capital." Mr. E. S. Forrest wrote:—"With reference to the circular letter of the 15th inst., I think that if the capital is increased, it should be to £250,000." Mr. George Utley wrote as follows:—"I have your circular letter of the 15th inst., and pleased to confirm my confidence in the respectability and capacity of our directors. I am quite in favour of the conversion of our stock into £1 shares as a much more saleable security. As regards further issues, you know better than myself the advantages of extension, and I am prepared to follow you in this way." Mr. H. F. Townshend Chambers wrote:—"In answer to your circular, received to-day, I beg to state that, having every confidence in the board of directors, I shall abide by whatever decision they may come to in the matter of splitting the £10 shares into £1 ones. The increase of capital I consider to be a good move, and the African and Rhodesian undertakings I consider sound undertakings." Mr. Joseph Shafton wrote:—"Your circular of 15th inst. to hand, I agree to the shares being divided, and the increased capital. I enclose application for further 200 shares at par."

The resolutions were then put to the meeting, and adopted *nem. con.*

Mr. BONNARD proposed a vote of thanks to the Chairman and directors for their services.

Mr. BEDFORD seconded the motion, which was carried unanimously, and the proceeding terminated.

## SCOTTISH AUSTRALIAN MINING COMPANY, LIMITED.

The half-yearly general meeting of the shareholders of the Scottish Australian Mining Company (Limited) was held at Winchester House, Old Broad-street, yesterday, the chair being occupied by Mr. GEORGE SMITH.

The SECRETARY (Mr. F. W. Turner) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—in the report which the board have issued, they have fully set out the state of matters which has had to be dealt with in the course of the past half-year. What I have stated to you on previous recent occasions about the condition of the Australian coal trade must, I think, have prepared you for the position in which we find ourselves to-day. The financial disasters in the colony in 1893 left behind them a legacy of depression and want of confidence of an unprecedented character, and the coal trade has presented no exception to other industries in respect of slackness of business and absence of profit. There has, I am happy to say, recently become apparent a general tendency towards improvement. I believe this is steadily, although slowly, growing, and that, in due time, the coal trade will feel its favouring influence.

In the meantime, so great has been the competition for such business as has been going, that it has been impossible to do more than make both ends meet, and to maintain, and, if possible, to extend, trade connections. The volume of the general coal sales of the Newcastle district shows a slight increase of between 70,000 and 80,000 tons in the past half-year, as contrasted with the corresponding period of 1894. This increase is due, I am happy to say, mainly to the expansion of the foreign trade. Here we have a fact which shows that current low prices have been assisting Australian coal to recover some of its hold on foreign markets from which it had been driven by the competition of cheap coal from foreign countries and low freights from this country. As regards our own share of the trade, considering that our manager, Mr. Croudace, has been doing his utmost to maintain prices, and has only yielded from time to time to prevent the loss of connections through the unwise forcing down of prices by other collieries, I think we have done fairly well. True, one half-year's sales show a decrease of about 15,000 tons, but special circumstances account for this. Lambton was closed for five weeks in order to bring about as peaceably as possible an absolutely necessary reduction of wages.

Burwood was not closed for that purpose, but an important alteration—viz., the erection of a belt screen designed by Mr. Croudace to effect economy in what I may call, the mechanical working charges, necessitated a stoppage of work there for about four weeks, and heavy floods in the early part of the year caused further interruptions to work. I think, therefore, we may be satisfied that we have held our position in the trade. As regards working charges, you will see that we have succeeded in getting a slight reduction of wages, although it seemed at one time that this would have brought about a general strike. But, desirous as we must be that the workman shall get as much as is reasonably possible, and shall live in comfort, it is absolutely necessary that he should face the present situation and take a somewhat lessened share of the value of the coal which he raises; for it is obvious to all that colliery owners cannot go on indefinitely working their properties, and exhausting their coalfields for the sole benefit of the consumer and the workman. I hope therefore that we may see further economy effected in as quiet a manner as that already referred to. Now, gentle men, although it must disappoint you all, as it does your directors and manager, it cannot surprise you that we cannot to-day offer you a dividend. I think, too, that those of you who appreciate the importance of financial strength to the company in such a struggle for maintaining our position, as we are now engaged in, will fully concur in the view of the board that it would be unwise to make a distribution out of the reserve fund on the present occasion. We must husband our strength all we can, and show to our competitors that we are able to face temporary cessation of returns without flinching. We may do this all the more easily if we look back a little into past history. This company was established in 1859, and during the 36 years of its existence, putting prosperity and adversity, times of high dividends and no dividends together, it has returned to you dividends at the rate of 11 per cent. per annum upon the average paid-up capital. Not many companies can show a longer and better record, and the board are, therefore, confident that you will cordially support them in their present policy. You will ask me, no doubt, what we think about the future. Well, that is a matter on which I must speak with all becoming diffidence. For myself I am hopeful, but I cannot think that the half-year now current can be a very prosperous one. But I will take you back to history again. In the years 1870 and 1871 the company had

to face a similar state of matters, dull trade, intense competition, everyone fighting for his own hand. For the half-year ending with December, 1871, the company paid no dividend. The following half-year we paid at the rate of 4 per cent. per annum; the next, 8 per cent.; the next, 12 per cent.; the next, 15 per cent.; and then followed that long course of prosperity, in which dividends of from 15 to 20 per cent. became so common that some of our friends, and a good many of the public, seemed to think that this would go on with the permanence and regularity of Consols. Now, I do not say that this piece of history is going to repeat itself, circumstances have changed very much, more collieries have been opened in Australia, and the important competitive coal field in Japan has come into being, and the days of exuberant trade returns seem to have largely passed away, and the day of "small things" to have taken their place, very generally. But I do say this, that the coal trade of Australia has a very fair prospect before it of returning, ere long, to a condition of satisfactory prosperity, and I, for one, and I think I may say the same for my colleagues, and, probably, for most of you, would not be willing to part with my interest in the company at the present market price of the shares. Look for a moment at the company's properties. We hold three large collieries, two in active work, the third ready to come into production whenever trade will permit of it. We possess the Cadia properties of over 3000 acres, from which large quantities of copper have, in the past years, been sold, and in which, by the evidence of the remarkable nuggets which we have here, we know there is gold, although a paying reef has not yet been discovered. We have another large copper property near Rockhampton, in Queensland, a number of smaller properties for coal and gold in New South Wales, and some well-situated building land in and near Newcastle. The total holdings make up nearly 18,000 acres of land, the greater part of it being freehold. Gentlemen, all this is patent to you in the report which you have received. I call your attention to it because, in times of trouble and crisis, it is well that we should take stock, as it were, and set clearly before ourselves the solid foundations on which this company rests. You may feel assured that your directors and officers will do their utmost to conserve the company's interests, and that Mr. Thomas Croudace, the company's general manager, than whom no one better understands the Australian coal trade, will continue his efforts to work the collieries with economy, and, so far as it lies in his power, to good account. I beg to move:—"That the report and accounts now submitted be received and adopted."

Mr. F. P. WARD seconded the motion.

Mr. H. D. H. FERGUSON said: Gentlemen—I have only a few words to say on this occasion, which is the first time since I joined the company, very many years ago, that we have no dividend, and though we are in rather low water for the moment, there is clearly no blame to be attached to our directors and managers, who seem to have, as usual, done their best for us under very anxious and disheartening circumstances. However, the cloud will pass over and good times will come again; so let us possess our souls in patience. But there is one point in the report on which I would appeal to the board to have mercy upon us. I allude to the proposed call of 5s. per share on the 50,000 new shares. I do not doubt that the matter has been very carefully considered by the board, but I would ask that it be reconsidered, and that they would continue for a little while longer the considerate plan they have so far adopted of making temporary provision for the money required.

Mr. JOSLIN said that the large output of coal and the small return in profit was rather a serious matter for the company, because they were getting rid of the coal in the mines. It would, of course, be impossible to close the mines altogether; some expenses at the pits must go on, but if the crisis were to continue for a long time—as seemed likely to be the case, Japan being a formidable competitor—the exhaustion of 100,000 tons of coal every half-year would certainly become a serious question. It had occurred to him whether nothing could be done in the way of inducing the company's competitors to come to some agreement as to price. He did not make these remarks in any fault-finding spirit; on the contrary he, in common with all the shareholders, sympathised with the board in the difficulties against which they had to contend. But the directors should consider the advisability of decreasing the output for the company's mines would certainly not last for ever.

Mr. FERWERD reminded the shareholders that it was absolutely necessary for the directors to keep up the company's connection. The work of recovering a connection once lost was one of immense difficulty. (Hear, hear.) At the same time, in view of low prices, he quite agreed that the comparative smallness of the output for the last half year was rather to be desired than deplored. There was one question he wished to ask—Whether the new colliery, which had cost as much as the other two put together, was yet ready to be worked? While cordially recognising the co-operative feeling on the part of the company's competitors, he thought the company should be in a position to act independently if they desired to do so. It should be remembered that there were some expenses always going on in connection with the colliery, such as the cost of pumping and the wear of the machinery lying idle, always much greater than when it was in full use. He was perfectly satisfied with the directors' report, and was heartily glad that there was not a debit balance in the revenue account. He looked forward confidently to a very much better state of things in the future.

Mr. PEEL asked whether the Lambton and Burwood Collieries were worked together, since he noticed their accounts are made up together.

The CHAIRMAN, in answer to Mr. PEEL, said that the accounts of Burwood and Lambton Collieries were kept separate. The board knew exactly what each colliery did, but it was not thought necessary or advisable to publish their working accounts separately. The new colliery at Burwood had been a valuable acquisition to the company. Its coal was second to none in the Newcastle coal fields, and if at any time it should be necessary for any purpose to close Lambton the company could go on with the working of Burwood. The colliery was bought for £27,000, and it was thought to be worth nearly twice that money in the market now. The company would feel the benefit of it when better times for trade came round.

The motion for the adoption of the report and accounts was then put and carried unanimously.

The auditor was also unanimously reappointed.

A vote of thanks to the Chairman for his able and lucid speech, to the board generally for their able conduct of the company's affairs, and to the London and Colonial staff, cordially given on the motion of Mr. FERGUSON, terminated the proceedings.

At a meeting of the directors of the WEST AUSTRALIAN MINES DEVELOPMENT SYNDICATE (LIMITED), held at 79, Queen-street, E.C., an interim dividend of 10s. per share (less tax), on the ordinary shares, being 100 per cent. on the paid-up capital, was declared out of the profits arising from the company's operations since its incorporation in April last, the warrants for which will be posted on the 28th inst.

**SALISBURY-MURCHISON GOLD MINE, LIMITED.**

The first (statutory) ordinary general meeting of the shareholders in the Salisbury-Murchison Gold Mine, Limited, was held yesterday at Winchester House, the chair being occupied by Mr. J. B. Ball. The SECRETARY (Mr. H. Cameron Richardson) read the notice convening the meeting.

The CHAIRMAN, in the course of his address to the shareholders, said that the meeting was a statutory one, held in accordance with the Act of Parliament. Although the Company had come out during a lull in the market, when, consequently, there was a smaller response to the prospectus than they had the right to expect, the whole of the shares offered for subscription were taken up. They stood, therefore, now in the position of having a working capital of £20,000, of which £2,335 had already been expended on machinery and for the requirements of the property in Australia. A considerable portion of the remainder was at the bankers, and the rest would be paid up from time to time, as the instalments upon the shares became due. The directors, in paying the purchase money, were guided by a cablegram received the other day from Mr. Phoenix Cowle, which was as follows: "Five leases—Agamemnon, Tasmania, Agamemnon North, Huntington Tower, Salisbury. Registered name, Thomas Hewitson. Titles clear; provided by Government. Instruments not yet issued. Declaration of trust, Hewitson; favour Salisbury. Murchison Gold Mines, Limited; lodged Union bank; Cowle, solicitor." The arrangement reflected in the telegram was, no doubt, sufficient for the time being; but the directors now considered that it would be advisable to have the titles made out in the actual name of the company, and had accordingly given instructions for them to be again transferred. The board had lost no time in getting to work upon the preliminary arrangements in connexion with the company. By the advice of their consulting engineers, Messrs. J. & W. Frecheville, they had already ordered and sent out hoisting and winding engines, purchased partly in this country and partly in Sydney. They had also sent out sufficient money to enable the prospecting, which had been commenced by the vendors, to be vigorously prosecuted. The shareholders would understand that the mine was a long way off, and that communication could not pass between the board and the property in less than six weeks. It would thus be seen that, owing to the short time which had elapsed since the incorporation of the company, the directors could have but very little information to give as to the actual progress of affairs at the mine. The selection of a manager was, of course, a very important matter. Having taken the best advice possible on the subject, they eventually appointed a Mr. Wattis, who was now in charge of the property. The directors had hoped to be able to place before the shareholders the result of a crushing representative of the whole property, but all they were able to give was the result of a crushing of 48 tons from one of the properties only—the Agamemnon—which worked out at the not very satisfactory average of 12 dwts. to the ton. Instructions had, however, been given for a trial crushing of 100 tons of Salisbury ore, and the result would be made known to the shareholders as soon as possible.

Mr. FRECHEVILLE, the company's consulting engineer, said that during the short time the property had been in the possession of the Company, a shaft on the Salisbury, carried to a depth of something like 70 feet by the previous owners, had been continued to about 120 feet in depth. There were four shafts on the property in all, and they were now being deepened. In the Agamemnon and the Salisbury the reef had been proved to a width of from 3 feet to 4 feet.

On the motion of Mr. LASKER, a cordial vote of thanks was given to the Chairman and Board, and the proceedings terminated.

It is announced that the transfer books of KENWARD AND COURT (LIMITED) will be closed from November 5 to 12, for the purpose of preparing dividend warrants for the half-year ending September, 1895.

The list of applications for shares in the ECLIPSE GOLD MINING COMPANY (LIMITED) closes to-day.

**MINING IN CORNWALL****AND DEVON:  
NOTES ON MINING IN THE WEST.**

(FROM OUR SPECIAL CORRESPONDENT.)

THE discussion of the matters in dispute between East Pool and Wheal Agar continues, and the situation is as yet in no way relieved. There was on Thursday a meeting between the two committees, and, after a few hours' discussion, they separated without having made any headway. If the Wheal Agar version is to be accepted—and it has not been controverted—the representatives of East Pool declined to make any offer, and the overtures had to come from themselves. They accordingly made two offers; in one they agreed to work the engine, and run all risk of breakages, and keep it in repair for a contribution from East Pool of £200 a month, and the other was to amalgamate on the basis of Wheal Agar taking one share in the new concern, and East Pool two. Amalgamation was declined, and the other offer was met by a counter offer of £100 a month. On the following day the shareholders of Wheal Agar met, and the offers were somewhat modified. The £200 a month proposal was reduced to £175, and there was further suggestion of out-and-out purchase by East Pool, resulting in a definite proposal to sell for £12,000. There the matter stands, and now the East Pool shareholders must play the next card. We say "shareholders" advisedly, because, as we have pointed out before, the East Pool committee is small in number, and an offer from one body of shareholders to another should merely be met by an acceptance or refusal from those to whom it is made. East Pool committee, too, has so diminished that it is unfair that the responsibility of the thing should be left on their shoulders. Mr. Branwell (the Chairman) has, unfortunately, from considerations of health, been unable to take that part in the recent negotiations which he would otherwise have done. Mr. Woolcock is, or was, until recently, a member of both committees, and everyone would be prepared to admit the capacity of Mr. Henry Rogers to settle the whole matter in a very short time; it is scarcely fair that the whole responsibility should be thrown upon him. We hope the shareholders at their meeting will take the advice which has been before proffered, and strengthen the committee. It is possible that no meeting will be held until the 18th, when it becomes due; but if the committee so decides, it is no reason why the offers for Agar should not then be discussed, and in the meantime the committee could agree to pay proportionately up to the time of the meeting.

THE threat which East Pool is throwing out now is that they will erect an engine of their own, and thus become entirely independent of their neighbours. The estimated cost is £8000, and, as in the ordinary course of things, estimates are always substantially exceeded, that may be expected to be £10,000, and they can buy Wheal Agar and engine and all the plant on the mine for £12,000. It seems the height of folly, therefore, to throw away £8000 or £10,000 in putting up a new engine which shall be entirely superfluous. Wheal Agar engine is quite capable of pumping the water of the district, and the erection of another might lead to future complications and disputes. Amalgamation is, we believe, the best solution, but we despair of any settlement with the committees constituted as at present.

DOLCOATH shaft will be formally started this week, and with good progress it can scarcely be expected that it will be down to the bottom of the mine in less than four years. It will, if careful supervision and the employment of the best labour to be obtained can secure it, be a fine piece of work. Cornish miners who have been engaged at the Tamarack and other foreign mines where some record sinking has been done, are available, and will be put into the shaft. There are some people who have been extremely busy in decrying Dolcoath within the past month or two, but those whom they have succeeded in persuading to dispose of their holdings are likely to have a rude awakening when they hear the report which Captain Josiah Thomas will be able to give on Saturday.

SHAREHOLDERS in Carn Brea and Tincroft are likely to have a far less cheerful time on Tuesday than shareholders in Dolcoath may reasonably anticipate. It is known that the loss at Carn Brea will be heavy, and a stiff call will be required to meet it. There is a vast amount of promising ground in the sett, and no reason for supposing that prosperity will not return to the great mine, which not very long ago was almost regarded as having displaced Dolcoath as the premier concern of the county, but the present situation is naturally regarded by the shareholders as extremely irksome. At Tincroft there will also be a loss, though whether a call will be required is still uncertain. Some anxiety is felt as to the operations the executive are credited with an intention to commence in the recently acquired Cook's Kitchen sett, but it is highly improbable that any very extensive workings of a speculative character will be attempted under existing conditions.

**CAMBORNE MINING SCHOOL.**

A GRACEFUL and fitting ceremony took place last week at Camborne, when the recent considerable extensions to the school were opened. The school had a very modest beginning not many years ago, but the additions which have from time to time been made to it have been so considerable, and at the same time so well-judged, that the establishment is generally admitted to be one of the best of its kind in the kingdom. Recently a large acquisition of membership made some further additions absolutely necessary, and it was with a view of meeting the vastly increased call upon its accommodation that the annexe, which formed the subject of last week's proceedings, was provided. The new wing contains a large laboratory in the most modern style, and a furnace room with a set of 16 furnaces. There is also a spacious vanning room fitted for tin assaying, and with fume and balance rooms. Beyond this, one of the most important additions is that of an admirably fitted lecture room. Of the £2000, which was the total cost of these new departures in the construction of the building, some £200 or £300 will be contributed by the Government, and a slightly larger sum has been already given by the County Council. The liberal and spirited policy which has led to these large additions to the fabric of the institution find justification in the fact that there are at present about 350 students attending the school, of whom fully one-fifth come from other counties. The inauguration was made the occasion of many able speeches relating to the mining industry generally, and to the Cornish form of it in particular. The speech of Captain Josiah Thomas, J.P., who presided, was especially worthy of the occasion, and reflected at once briefly and vividly the history of the institution from the commencement. The proceedings terminated with a vote of thanks to those who assisted to make the opening ceremony so great a success.

THE SUBSCRIPTION LIST WILL CLOSE TO-DAY (SATURDAY).

**THE "ECLIPSE" GOLD MINING Co. LTD.,  
KALGOORLIE, WESTERN AUSTRALIA (HANNANS).**

Incorporated under the Companies Acts, 1862 to 1890.

**CAPITAL****£85,000,**

Divided into 85,000 Ordinary Shares of £1 each.

52,500 Shares now offered for Public Subscription. Payable as follows: 2s. 6d. per Share on Application; 7s. 6d. per Share on Allotment; 5s. per Share on 25th day of November; 5s. per Share on 25th day of January 1896. Power is taken to issue Share Warrants to Bearer on application.

**DIRECTORS.**

SCOTT LINGS, Esq., J.P., Reddish, Stockport, Chairman.  
Major-General M. TWEEDIE, R.A., 67 Redcliffe Gardens, South Kensington, Director of the Golden Link Gold Mining Company, Limited.  
MONTAGUE J. SHEPHERD, Esq., 4G Hyde Park Mansions, W.  
Lieut.-Colonel W. T. ELLIS, Rydes Hill, Guildford, Director of the English and Colonial Syndicate, Limited.  
R. J. JENKINS, Esq., C.E., of Messrs. NEWTON, JENKINS & Co., Ormond House, Great Trinity Lane, E.C., Director of W. T. Henley's Telegraph Works Co., Limited.  
Captain W.M. CUMBERLAND, 18 Margaret Street, Cavendish Square, W., Director of "Great Boulder Main Reef Company Limited."  
CONSULTING ENGINEERS—BAINBRIDGE, SEYMOUR & Co., 13 St. Helen's Place, London, E.C.

LOCAL ENGINEERS.—F. BOWES SCOTT & Co., Engineers of the Golden Link, Chaffers, Golden Horse Shoe, and the White Feather United Gold Mining Companies, Western Australia.

BANKERS.—THE MANCHESTER & LIVERPOOL DISTRICT BANKING CO. LIMITED, 75 Cornhill, London, E.C.; Manchester, Liverpool, and Branches.

SOLICITORS.—MESSRS. GIBSON, WELDON & BILBROUGH, 27 Chancery Lane, W.C.

BROKERS.—MESSRS. CUTCLIFFE, LEY & McCULLOCH, 7 Adam's Court, and Stock Exchange, London, E.C.

AUDITORS.—MESSRS. FRANK DAVIES, MEREDITH & CO., Chartered Accountants, 95 & 97 Finsbury Pavement, London, E.C.

SECRETARY & OFFICES.—MR. ROBERT WARNER, Winchester House, Old Broad Street, London, E.C.

**ABRIDGED PROSPECTUS.**

This Company is formed to acquire and develop Mining Lease 750, formerly known as Leases Nos. 108 & 303, consisting of about 18 acres, situated in Kalgoorlie, about two miles south-east from Hannan's Gold and lying immediately along two sides of part of the Croesus Gold Mining Companies' property, and in almost a direct line with the Great Boulder Companies' Reefs, and is adjacent to Hannan's Brown Hill. The Property has been reported upon by the following, amongst other gentlemen:—

Mr. Nathaniel Hawke, late Mining Manager of the Croesus Gold Mining Company.

Mr. Robert B. Gleisberg, M.E., & M.E., Freiburg.

Mr. F. Bowes Scott, M.E.

Mr. Hawke in his report states: "There has been a costeen put across a very large lode on the boundary adjoining the Croesus, and coming out of that property, where it is known as Menze Lode, and known to be highly payable; this lode runs through the entire length of your property, and there is no doubt will prove to be rich for gold if properly opened up; 100 ft. further South-East from Menze Lode is Lode No. 2; this Lode also is one of the Croesus Lodes, from which very rich specimens have been taken for that Company, and there is no cause to offer why it should not be equally rich in your property. These Lodes carry gold in all places where they outcrop in your property, and there is no doubt will prove highly payable if properly opened up."

Near the South Boundary of this block a shallow hole has been sunk on the outcrop of No. 2 Lode, from which some very nice gold has been taken, and gold still showing in the stone."

In conclusion, Mr. Hawke adds:—

"I have no hesitation in saying that you possess a good mining property and a sound mining venture, but needing capital to bring it to the front."

Mr. R. Gleisberg reports, by cable, as follows to Mr. T. E. Elder:—

"Kalgoorlie, September 5th 1895.

"Eclipse lease 750, previous 108, 303. Eighteen acres. Two miles to the S.E. of Kalgoorlie, two distinct, probably more, auriferous deposits of the Kalgoorlie series running through property. The direction of the lode is N.W. Underlying westerly in prospecting shaft, average width of lode is 5 to 10 feet. Lode matrix consists chiefly of siliceous iron-stone, quartz, brown haematite and crecide (*sic*) of country formation, whole lode auriferous, almost identical with lodes of Croesus, Hannan's Brown Hill and Great Boulder; the country rock is same diabase schist as above-named mines. Workings: Three prospecting shafts. North and South shaft is 50 feet deep, middle shaft is 45 feet deep. Length of cross cut 60 feet. Various costeens. Expect to reach water level in 120 feet. Judging by what has been done before by more advanced mines, there is no doubt that

in my opinion the mine will develop into a fine property, highly payable."

An independent report has been received by cable from Mr. F. Bowes Scott, in the course of which he states:—

"Eclipse very strong Gold-bearing Reef formation. . . . I consider the Property well worthy of your attention."

The Vendor to the Company, Mr. E. M. Arthur, who bears all preliminary expenses (except brokerage) up to allotment, has fixed the purchase-price of the property at £62,500, payable as to £10,000 in cash, as to £32,500 in fully paid shares of the Company, and the balance in cash or shares, or partly in cash and partly in shares.

This will leave £22,500 of the Company's capital available for providing working capital.

For contracts, &c., see full Prospectus.

The Memorandum and Articles of Association, and the original written and cabled reports, as well as copies of the contracts, can be inspected by intending subscribers at the offices of the Solicitors of the Company.

Application for shares must be made on the form accompanying the Prospectus and sent to the Bankers of the Company, or to the Secretary, together with a deposit of 2s. 6d. per share.

Prospectuses and Forms of application may be obtained from the Bankers and Brokers, and at the offices of the Company.

## CORRESPONDENCE.

We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.

### ASSAYING AT THE FREIBERG SCHOOL OF MINES.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR.—It was, perhaps, scarcely to be expected that the remarks in my recent article on "Assaying at the Freiberg School of Mines" should have been passed without criticism from the attachés of the place. May I beg a little space to reply to the letters of Dr. Kollbeck and Messrs. Doerr and Cohen, which appeared in your last issue?

Your correspondents seem to agree that the article in question contained "many inaccuracies"; it seems, therefore, a little disappointing to find that not a single case of real inaccuracy is cited in either of the letters. In my article I endeavoured to describe, for the benefit of English students and assayers, exactly what I saw in going through the course of practical assaying at Freiberg, and the description is an accurate one, in spite of statements to the contrary by your correspondents; the critical remarks on the appliances, too, are, I believe, just.

Dr. Kollbeck is incorrect in stating that I went to Freiberg entirely without knowledge of German, though I admit I knew very little of the language on first going; indeed, one of my objects in visiting the Fatherland was the learning of the language. But I fail to see that this has anything to do with my appreciation either of the methods or of the appliances, which seem to be the sole subjects of criticism; and in a sojourn of 10 months, spent in hard work, I had surely ample time both for accurate observation and for learning the essentials of the language.

Dr. Kollbeck is again in error in stating that I said the appliances were insufficient; I merely said they were few. They are sufficient for the method of teaching used, but would be insufficient were any other method to be adopted. In stating that the muffle furnaces would hold eight or ten assays, I referred to the crucible assays often performed therein, and not to scorification assays. It would be possible to get 30 scorifiers into one muffle (as, indeed, I remarked further on in my article), but it would be impossible for anything like this number of crucible assays to be done.

Dr. Kollbeck further mis-states that I omitted to mention the tiny muffle furnaces used in silver assays. If he will have the goodness to refer again to the article, he will see these are mentioned under the head of silver bullion assays; being portable furnaces I did not describe them along with the permanent ones. With regard to the oft-debated question of scorification *versus* crucible assays for gold ores, I have heard all the reasons the advocates of scorification have to give. Suffice it to repeat that only one crucible assay of silver ore, and not one of gold ore, was done during the course last year, while many of the ores scorified were such as would be treated by fusion in England.

How far a mere lecture description of such an assay as the iodide copper assay is likely to be of real service to students without practical instruction, I leave your readers to form an opinion.

Sampling and the preparation of solutions may be taught in other courses. I repeat I aimed only at describing what was done in the assaying courses; a student entering for assaying at Freiberg gets no practice in sampling or making up his solutions.

Turning now to the letter of Messrs. Doerr and Cohen, if these gentlemen will have the kindness to read my article again they will find that, while pointing out what appeared to be defects in the course, I have not hesitated to commend such points as appeared to justify commendation. With regard to the duration of the course, I may remark that only in one case have I heard of a student working more than the four hours per week I mentioned. Of course, it is possible there are other instances, but, at any rate, the majority of the students confine their practical work to the short time indicated.

What Messrs. Doerr and Cohen have to say about the kindness and ready help of Dr. Kollbeck, I most cordially endorse. I never met a teacher more ready to help his students. But what amount of personal help can make up for the lack of independent working which the students suffer?

The Freiberg School may justly boast of its roll of brilliant dead-and-gone instructors; and of the present staff, some are in the foremost ranks of teachers of their respective sciences; but the present renown of the place is largely a reflection of past glory, and must fade unless an attempt is made to keep up to the march of progress by modifying equipment and method to suit the times. Had either of your correspondents worked for a time in the well-appointed assaying laboratory of our English Royal School of Mines, or in any similar one, my criticisms would have been better appreciated; but it is easy to be satisfied that any place is the best when one has seen no better.

The concluding remarks as to the value of the Freiberg degree, and so forth, whether true or not, are uncalled for. I confined myself to discussing the practical assaying work, and I did not intend to refer to the other courses. Since the subject has been widened in this way by the letter of Messrs. Cohen and Doerr, I may say I consider some of the other Freiberg courses—e.g., blowpiping and ore-dressing—far ahead of what we have in English schools at present. But, as I said, that is outside the subject of my article.

JOHN BALL.

### GOLD RETURNS AND FICTITIOUS VALUES.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR.—The present system of publishing only the quantity of gold extracted from a ton of ore, without a corresponding estimate of values, is a direct incentive to swindling, which is often availed of by the cunning and unscrupulous company promoter to entrap the unwary and gullible investor.

When one is treated to a sensational crushing of 9 or 10 ounces to the ton, he seldom stops to think what that may actually mean, and it is very often not until the second or third shareholders' meeting, and, after all the money, or most of it, has been safely snatched into the vendors' pockets, that the interesting ceremony about values takes place, and the unlucky investor, who hoped to make his pile from the friendly and reliable tip, often finds that instead of the sensational ounce being worth £3 to £4, it has only realised about 20s. or 25s., and in many cases considerably less. It is, however, patent to one that notwithstanding ages of dissemination, mining disasters, and all the ills that accrue from such a false and defective system, the born swindler can still pursue his nefarious calling, because the robbery is more or less a legalised one. The question may, therefore, be asked, why should it be legalised, and why should the investor, who seldom takes time to

think, not be protected as well as any other irresponsible gentleman who has plenty of money? The reason is not far to seek.

In the ordinary process of rescuing the gold, especially on highly refractory ores, a considerable proportion of refractory matter is taken up on the amalgam along with the gold, hence being inseparable except at considerable cost. It is sold with the gold, and, therefore, though it increases the returns, it greatly reduces the value of pure metal.

It seems almost incredible that returns of this description should be published as gold returns, but it is so, and accepted by all the Wardens, or, in other words, the Governments of Australasia, and Africa as well, for the matter of that.

It will thus be observed that by a shady and unreliable quantity, the inferior returns may be used for an infamous purpose, if no estimate of value be given, and no one will deny that such an estimate is very seldom submitted, when the returns are published. It is a notorious fact that in most companies recently brought out no money value has been attached; and, though many may be valuable and prosperous undertakings, yet it is the system, and chances of deception that can be availed of, which are the bugbears to satisfactory mining enterprise.

Evidently, from a promoter's point of view, if the object really were to get as much of the purchase money as possible, the best plan would be to secure a mine the returns from which are somewhat mixed and inferior, for so long as it is gold at any price, the position of the investors is a secondary consideration. Such a minor luminary must only be considered a stepping stone to the highly qualified, and doubtless, in his own estimation, scientific financial operator of the present day.

It may be argued that it would be difficult to accurately determine values to a meeting if the mines were somewhat distant from a common centre, where returns were appraised; at the same time it is safe to assume that investors will prefer approximate values to false returns any day, hence there the matter rests. But there is no getting over the fact at the present moment that the whole fabric on which mining interests stand is as utterly rotten as it possibly can be, and no one knows it better than the big mineowners themselves. Whether it suits another matter, and whether it is convenient for them to feed an adventurer or two, and still themselves retain the honour and *éclat* attached to the highly responsible position of a great mining authority, of course, requires no comment, but that it actually does exist, no one, generally speaking, has raised the question, and further, it may be presumed, few will take it upon them to repudiate the palpable insinuation.

It would, however, be refreshing to have a few of our mining luminaries standing forth in vindication of their honour, or, in other words, the honour of the general body of duly accredited great mining speculators, and if it should suit some of them to enter the arena, and openly declare that no mud could ever stick to their patent leather, there is not the slightest doubt but some interesting as well as instructive incidents, and other generally valuable information, will soon be elicited, for it only requires someone with a bit of nerve to set the wheel in motion. It is safe to say there is not a mining centre in the universe where the game has not been played over and over again, but we were not so civilised in those days. That gold mining enterprise can be reduced, commercially speaking, to as safe and profitable a basis as any other undertaking of an ordinarily fluctuating and speculative character, there is not, with all modern appliances and means at command, the slightest shadow of a doubt; but until the loopholes for dishonest practices are positively and absolutely removed, there will always remain that uncertainty between honesty and knavery that has more or less characterised the industry either under clouds or sunshine from its earlier stages of development.

Yours truly, D. S.

### HAMMOND'S MATABELELAND.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR.—You will confer a favour upon me by stating in your paper that I have no connection with the Syndicate "Hammond's Matabeleland," referred to in a recent issue of your Journal. The A. R. Hammond referred to has been represented as a prominent mining engineer of the United States, and of South Africa. Despite many enquiries among prominent American mining engineers here, I have discovered no one who had ever heard of Mr. A. R. Hammond as a mining engineer.—Yours faithfully,

JOHN HAYS HAMMOND  
Johannesburg, South African Republic, September 30.

ST. HELEN'S DEVELOPMENT SYNDICATE (LIMITED).—The second ordinary general meeting of the shareholders in the St. Helen's Development Syndicate was held yesterday, at Winchester House, Mr. Emerson Bainbridge, M.P., presiding.—The Chairman, in moving the adoption of the report, congratulated the shareholders on the general result of the year's work. Their manager, Mr. Shaw, had now been absent in Matabeleland about 12 months, and during that time he had done his work in a thoroughly efficient manner. Mr. Shaw had acquired 43,000 acres of farm and timber land, and up to the end of June 768 claims. They had also received a cablegram quite recently from their manager that he had acquired some valuable claims, but in this connection he was unable to give the meeting any definite information regarding them. Mr. Shaw would be on his way home in a short time, when the shareholders would be called together. One of the peculiar features of the company was that nearly everybody interested in the concern was paid by results. The total London expenses amounted to a little more than £150. As regarded the properties which, they had taken over at a comparatively small cost, they of course, had to look forward to the question as to how they should be dealt with. They had gone into another transaction, the property of which was a long way from Africa, and out of which they hoped to realise a considerable profit. Since the time Mr. Shaw had been in Matabeleland a considerable amount of development work had been done, and one of the claims which they had recently proved gave a result of 6 ounces per ton.—Mr. C. F. Tapp seconded the motion for the adoption of the report and accounts, which was carried unanimously.

RATING OF MACHINERY.—The Pontypridd Assessment Committee recently attempted to introduce an altogether new principle into the law of rating by assessing to the Poor Rate the machinery used by the Dowlais Iron Company in sinking their new pits at Aberdare Junction. The Dowlais Iron Company, on their objection before the Assessment Committee, were represented by Mr. G. Humphreys-Davies, the consulting surveyor to the Machinery Users' Association, of which the company are members, when the Assessment Committee confirmed the assessment, and intimated their intention of upholding this novel method of rating. The company entered an appeal for the ensuing Quarter Sessions, which were recently held at Swansea, when they were represented by Mr. Edward Boyle, specially retained, and Mr. Howell, instructed by Messrs. Dolman and Pritchard. The Assessment Committee were represented by Mr. Benson, instructed by Mr. Pickett. After considerable discussion the respondents withdrew from the position they had taken up, and the entry in the Rate Book was struck out, and the appeal allowed with costs. The witnesses for the appellants were Mr. G. Humphreys Davies, Mr. W. J. Rees, of Swansea, Mr. Rhys, of Merthyr Tydfil, Mr. Martin, and Mr. James, of the Dowlais Iron Company.

## REVIEW.

*South Africa: a Study in Colonial Administration and Development.* By W. Basil Worsfold, M.A., of University College, Oxford, and of the Middle Temple, Barrister-at-law. Methuen and Co., 36, Essex-street, London, W.C., 1895.

There could hardly be a more opportune moment for the appearance of this book than the present, when the Transvaal iniquity, and when it is of the highest importance that Englishmen at home should thoroughly inform themselves concerning the course of affairs at the Cape. No far-seeing politician would now seriously dispute that the relations between governors and governed north of the Vaal river have long foreboded a crisis, and when the cloud bursts it will be essential for the maintenance of British interests that Englishmen, both at home and abroad, in private as well as in public capacities, should be prepared to act in the full light of history and reflection. At present it would be the merest affectation to deny that a good deal of ignorance exists in England as to the merits of race and other problems at the Cape. Colonists on the spot have a full knowledge of the situation driven home to them with all the weight of experience; but we at home may be thankful for enlightenment in book form, and especially from a pen so graphic and cultured as that wielded by Mr. Basil Worsfold. Any one who contributes the result of his serious reflections to the literature of Imperial policy has as unquestionable a title to our regard as to our attention, and we have returned the book to its shelf with a very cordial feeling towards its author.

The book before us does not deal in any narrow spirit of exclusion with affairs concerning the colony alone. On the contrary, the writer ever keeps in view the laws and conditions generally governing colonisation, and in the result has given us a thoughtful essay on Imperialism. South Africa is broadly studied in its functions as a vigorous, enterprising member of the Imperial Union, and into the history of its career are read many instructive lessons of Downing-street blundering and individual achievement. For the early chapters, covering a period from the landing of the Dutch in 1652 to the Dutch capitulation to Admiral Elphinstone in 1795—and even for some decades further on into the time of the English settlement—the narrative, as was inevitable, is somewhat light and sketchy, but it soon broadens out into a close description and an analysis, more or less minute, of the conditions, political, economic, and social, which now distinguish life at the Cape settlements, and which form essential factors in the abstract but fascinating problem now working itself out under the jealous scrutiny of the Continental powers. A glance at the table of chapters is sufficient to show the broad view the author takes of his functions as the historian and critic of the colony, and an attentive reading of any one of the many carefully-written passages abounding in the book will show that Mr. Worsfold brings to his task many higher qualifications than the ability to narrate facts in a terse and lucid style, which, according to the modern historical school, of which Mr. Lilly may be taken to be an authoritative mouthpiece, is really a very second-rate merit after all. In plan, as well as in execution, the volume stands high. Its subject-matter may be briefly summarised. A slight but pointed presentation of the facts connected with the early history of the colony leads naturally enough to the period of the Kaffir wars, and this again leads the author naturally to treat of the doubtful and vacillating course of policy pursued by the responsible Ministers at home in their early dread of undertaking responsibility, and in their tardy attempts at carrying into effect a policy of federation. The strictly historical part of the book may be said to end with the chapters on Natal and the Kaffir problem, and on the Bechuanaland settlement. Henceforth the writer confines himself to the important task of reflecting the actual condition of affairs at the Cape settlements in relation to questions of industry, race, and government. In this connection one of the most valuable passages in the work is the suggestive description of the agricultural and pastoral resources of the colony, which may be safely commended to students of political economy as a penetrating analysis of the conditions under which the agricultural industries are at present carried on. No book could be written upon South Africa which entirely ignored the mining industry, and Mr. Worsfold has added a couple of chapters on diamond and gold mining that will very fairly convey to the average reader an intelligible idea of the manner and extent of these important branches of commercial activity. Some 20 pages at the conclusion of the volume are reserved to the stirring and eventful times which witnessed the establishment of the Chartered Company, under the statesmanlike initiative of Mr. Cecil Rhodes, and the downfall of Lobengula's power. These passages in our national life have hardly yet passed into history, although the stirring scenes of warfare and territorial expansion which were their leading features have long since reached their finality. The author has treated this occurrence from both the business and the political points of view, and very vividly and well he has stated the case. One section of the work we have reserved to the last. The chapter in which the author reviews, necessarily superficially, but with penetration, and a certain gift of sound literary judgment, the more solid intellectual productions of South Africa, substantiates a serious claim to the reader's attention. Much of that colonial sentiment which finds its expression in the poetry of Pringle, and the subtle analysis of character and the vivid picture-drawing of Olive Schreiner is in great measure identical with the patriotic and race instincts. Here then, if anywhere, is to be found the real reflection of the colonial attitude of mind towards the mother country, and there is abundant satisfaction in the reflection that even an extremist of the Imperial habit of mind can peruse with close attention the graphic and musical descriptions of the one, and the inspired declaimations—for they are nothing else—of the other, and yet find no ground for discouragement. We have wandered some way into a by-path of our subject, but the responsibility for the temptation to do so must be with the author, whose writings certainly promote independent thought as certainly as they convey information. To return, then, we have nothing but praise for the book—for its plan, method, style, and appearance; and we can promise anyone who shall go to the trouble of taking it up that he will not easily persuade himself to put it down.

VIOLET CONSOLIDATED.—The following advices have been received from the manager, dated September 25: The shaft has been sunk to a further depth of 53 feet during the month, and the 9th level will shortly be opened out. The reef has widened to 3 feet in thickness, and pans well. During August 1157 tons of tailings were treated, giving 261·3 ounces, sold for £706. The average value was 11s. 10d. per ton, costing 5s. 8d. By working on a larger scale the cost should not exceed 4s. 6d. per ton. In the crosscutting from the reef, another reef, known as the middle reef, has been struck. The mill, after having been employed in crushing tests on some 6000 tons of ore with favourable results has been closed down pending development. Mr. G. J. Malcom Keerton will act on the board as alternate of Mr. Robert Arnot during the latter's absence in South Africa.

## JERSEY LILY GOLD MINES, LIMITED.

We are informed that an early issue will be made of this company, with a capital of £150,000, in £1 shares, of which £250,000 will be available for working capital. The purpose of the company is to acquire and work certain well-developed gold mining claims situated in the Hassayampa mining district, Yavapai county, in the territory of Arizona, and consisting of the Jersey Lily, Gold Treasure, and Helen Frances claims. Messrs. Bainbridge, Seymour, and Co. have reported upon these claims, and it appears from their statements that the Jersey Lily is 1250 feet in length by 600 feet in width, and the Gold Treasure 758 feet in length by 600 feet in width, and the lodes may be traced throughout the whole length of these claims, on which consequently 1960 feet are exposed along the strike of the lode. As to the Helen Frances, this claim is 1500 feet in length by 600 feet in width. There can hardly be any water difficulty in connection with the mine, for west of the mines, about three miles, at the foot of a gradual slope, is the Hassayampa river, where water can be obtained in sufficient quantities for milling the ores of the properties. The plant can be placed either at the mines, and the water pumped to the same, or a road constructed at a small cost to the river, and the ores hauled at a small cost to this point to be treated. The working of the property will be further facilitated by the fact that fuel and mining timber are abundant. The property would appear to be an extremely valuable one, for the ores are very rich, and at no point where the lode is exposed is it so impoverished as to be barren of pay ore. This is the more remarkable, for even where the lode is as much as 7 feet wide in the south face of the 200 feet level, the whole width assayed at the rate of \$22 per ton. Samples already taken from the various points on the property assay from 1 ounce to 4½ ounces of gold to the ton. According to careful estimates there are approximately 4000 tons of ore in sight of an average value of \$35 per ton, or a gross value of (say) \$150,000. In composition the ore is largely quartz, which is grey in colour and sometimes chloritic. It carries gold both in a free state and also in combination with iron pyrites, and sometimes chalco-pyrite. For the most part it is easy to break, and to a depth of 100 feet may be called free milling. The high opinion of the property entertained by Messrs. Bainbridge, Seymour, and Co. is summed up in the phrase that "the Jersey Lily and Gold Treasure constitute a mass of abnormally high grade ore, and of good continuity." The ores of higher grade can be readily shipped to the smelters at a total cost of \$27 per ton, or it can be reduced to bullion on the ground by the cyanide process. The ores above the water level can be worked also by the cyanide process or worked in stamp mills near to the property. Wherever opened on the surface the veins show ores in quantities that will pay a profit over the cost of extraction and treatment. The board comprises the following gentlemen:—A. E. Walton, Esq., F.G.S., M.I.M.M., 8, Drapers'-garden, E.C., director of the Croesus South United Gold Mines, Limited (Chairman); C. Lucius O'Brien, Esq., 6, Templeton-place, Earl's Court, S.W.; W. R. Robinson, Esq., 10, Coburg-place, Hyde Park, W.; S. Nugent Townsend, Esq., J.P., Brunswick Lodge, Kew; W. C. Bashford, Esq., Prescott, Arizona, U.S.A.; D. E. Keating, Esq., 35, New Broad-street, E.C.

## COMPANY FINANCE.

### Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

#### The Consolidated Gold Fields of South Africa.

The following is taken from the report of the directors:—The realised net profit on the year's working, after deducting debenture interest and all outgoings, shows a balance to credit of £1,61,778 0s. 11d., out of which the dividend on the preference share has been paid, together with an interim dividend of 6s. per share on the ordinary shares, leaving, together with the amount brought forward from last year, a balance still available of £1,970,741 19s. 7d. The directors recommend that a final dividend of 20s. per share be declared, free of income-tax, making, with the interim dividend, 25s. per share for the year, and that £200,000 be added to reserve fund, leaving a balance of £1,145,741 19s. 7d. to be carried forward to the credit of the current year. In addition to the foregoing realised profit, the company's share investments, as per Schedule 1 (apart altogether from profit shown on market values of shares held in Deep Level companies formed since June 30, as per Schedule 2, or from any appreciation in value on claims, properties, and estate holdings, as per Schedules 3, 4, 5 and 6) show, on the priors of October 16, a further unrealised profit exceeding £9,000,000. The reserve fund now stands at £187,727 0s. 9d., and is invested in British Consols. To this it is proposed to add the £200,000 referred to above. During the year, after dividing the ordinary capital of £1,250,000 into 625,000 six per cent. preference shares and 625,000 ordinary shares, the directors successfully issued a further 625,000 six per cent. preference shares. The entire cost of the issue amounting to £14,555 10s. 11d., has been charged to profit and loss. Reviewing generally the company's investment, the board are of opinion that they never stood in a more thoroughly sound position, and reference to the figures will show that the increase in values over cost price has never been so great as at the present time.

#### The Montana Mining Company.

The following is taken from the report of the directors:—The revenue account shows a profit of £18,995 5s. 1d., of which £16,428 4s. was applied in payment of dividends on April 17 and July 1, leaving a net balance of £2567 1s. 1d., which, with the sum of £3434 13s. 4d. brought from the previous half year, gives a total of £6001 14s. 5d. to be carried forward to the next half year. The expenditure during the half-year charged to capital account comprises:—Legal expenses in connection with the lawsuit, £1655 16s. 11d.; expenditure incurred in patenting and perfecting the company's title to adjoining claims £1071 16s. 11d. equal £2727 12s. 10d. During the six months ending June 30 last the mills reduced 27,230 tons of ore, which yielded in bullion bars and concentrates (on assay coinage value) \$544,061, equivalent to \$19.98 per ton, as against \$14.18 per ton in the previous half-year. The actual realised and realisable value of the ore amounted to \$397,617, the difference on the coinage value being \$146,444, or 232 per cent. on the gold, and 52.66 per cent. on the silver produced. The average net realisable value of the ore treated was, therefore, \$14.60—say, £3 0s. 4d. per ton. The proportionate money value of the precious metals contained in the ore was gold 68.23, and silver 31.77 per cent. The directors regret that they are unable to report the discovery of any important ore body during the six months under review. Acting on a wish expressed by Mr. R. T. Bayliss, Professor Raymond, and Mr. T. A. Rickard have carefully examined the deeper workings, and embodied the result of their investigations in a report. It will be observed that these

gentlemen heartily approve the vigorous exploration of the lower levels of the mine, both north and south, especially southward—and are of opinion that the barren zone indicated, but not fully proved below the 800 feet level, does not preclude the hope of new discoveries of valuable ore.

#### The Flagstaff Company, Limited (Star of Coolgardie).

The following is a copy of circular issued to the shareholders:—Now that some definite result has been obtained, the directors have much pleasure in sending you extracts from some of Mr. Wright's recent reports, and copy of a cablegram received from him on the 17th inst. On August 27 Mr. Wright wrote from Coolgardie as follows:—"I am trying to get 300 or 400 tons put through the battery. The mine is opening up splendidly, and is one of the best in the field." On September 3 he wrote as follows:—"Since my arrival on the field I have been anxious to confirm and verify the report I made to you on March 28 last, as it was upon that report mainly that you bought the mine. I am now pleased to confirm all that I said in my report. I have verified the estimated amount of the 'precious metal' in the ore by making a large number of tests (by means of dollying and washing). The stone taken for the purpose of these tests has been picked from the reef haphazard, and also from the several heaps of ore now lying on the surface. When impossible to detect gold in the ore, even with the assistance of magnifying glasses, the precious metal extracted by means of 'dollying and washing' goes to prove that the gold is very fine, and very evenly distributed throughout the mass. The estimate of 2½ ounces per ton of quartz will, I feel assured from these tests, be well maintained, and the reefs going down with continued regularity. The reef on the Star has been proved to a depth of 100 feet. At this depth it is 4 feet 6 inches wide, and the ore is equally as rich as any yet taken out of the mine. Cablegram received October 17:—"A trial crushing of 16 tons has yielded 23 ounces retorted gold. The gold is very fine and most difficult to save. An average sample of tailings assayed 2 ounces to the ton." The gold from these tailings can be readily obtained by the "Cyanide Process." It is expected that further crushings will be shortly reported. Mr. Wright also considers that the mine has now proved sufficiently productive to furnish ore for 30 stamps instead of 10. It has been found by experience of the quartz of the district that one stamp will crush 2½ tons per 24 hours. The result of this trial crushing therefore gives an aggregate yield of gold from the plates and in the tailings of 3½ ounces to the ton, which exceeds the estimate given by Mr. Wright in his original report upon the mine of March last. The directors regard this as highly favourable to the future prospects of the company.

#### The Wassau (Gold Coast) Mining Company (Limited).

The following circular has been issued to the shareholders:—The produce of the mine for the month of August last realised £1246 7s. 9d. The 10 stamp battery worked 11 days 20 hours, and crushed 237½ tons of ore, producing 320 ounces standard gold, giving a yield of 1 ounce 7 dwts. per ton. Cablegrams have been received advising 285 ounces bullion shipped for September; yield 1 ounce per ton. Good progress has been made in the development of the Cinnamon Bippo property, five tunnels being simultaneously driven. The construction of the line of railway is also progressing satisfactorily. Good results may be expected from the recent visit of Governor Maxwell to the mining district. The Government propose to make a road from the river side up to the mines, covering the whole distance of the land transport, provided the mining companies contribute half the expense. In view of the great benefit to be derived from this, the directors have offered to contribute one-fourth, not to exceed £1000 towards this object.

#### The New Chum Gold Mines.

A circular, signed by the secretary, has been issued to the shareholders, stating "that the latest mail and cable advices received from the mines are most satisfactory, and this they are particularly pleased to report, in view of the difficulty met with in dealing with the very large inflow of water at the 493 feet level. The air compressor, with extra boiler power, will be working almost immediately, thus enabling the manager to make much more rapid and economical progress. The crosscut east has now been carried through to both the east and west legs of the reef, a fact which proves it to be a saddle formation, whilst the distance between the east and west legs is positive evidence that the cap, or main saddle, is about 80 feet above the 493 feet crosscut. A considerable profit will result to this company from the sale of the 12-acre block, and the directors will shortly be in a position to make a substantial distribution amongst the shareholders, by way of interim dividend, the amount of which is necessarily subject to legal advice as to the precise amount properly available as profit under the requirement of the Companies' Acts. Mr. W. W. Barker has been appointed legal manager to the Southern New Chum Gold Mines (Limited), and Mr. George Phillips has undertaken the mines management. Mr. Barker has been instructed to obtain contracts for sinking main engine shaft, and development work should by now be well in hand."

#### Mysore Gold Mining Company (Limited).

At a meeting of the directors of this company, held on Monday, it was resolved:—"That an interim dividend (free of income tax) of 2s. 6d. per share be, and hereby declared, payable on the 16th day of November, 1895, to the shareholders on the books of the company on the 26th October, 1895, and that the transfer books be closed during the said 26th October 1895."

The warrants for the dividend of £5 per share on the £1 fully-paid shares in the AUSTRALIAN SYNDICATE (LIMITED) were posted October 19.

A call of threepence per share has been made upon the shares of the BRILLIANT CENTRAL GOLD MINING COMPANY (LIMITED), payable in Charters Towers, on December 5 next. All shares upon which the said call may not have been paid on or before December 31 will be forfeited.

We are officially informed that the first issue of £30,400 in the AUSTRAL GOLD EXPLORERS (LIMITED) having been over applied for privately, no public issue of the shares will be made. Letters of allotment and regret have been posted.

The Rio TINTO COMPANY (LIMITED) give notice that during the latter half of November the definitive bonds of their 4 per cent. first mortgage bonds 1895 will be ready for delivery in exchange for the scrip certificates, which may be sent in at once.

The directors of the DAY DAWN BLOCK AND WYNDHAM GOLD MINING COMPANY (LIMITED) have declared a dividend of 6d. per share (free of tax), payable on November 12, to all shareholders registered on the 26th instant.

The directors of the FRONTINO AND BOLIVIA GOLD MINING COMPANY have received advices from the mines, dated August 23 and September 7; also a letter from Messrs. Restrepo dated August 12. The statement for the month of August is as follows:—3000 tons produced bar gold, 2889 ounces; tributaries' gold produced bar gold, 231 ounces; total, 3120 ounces. Also 52,050 lbs. of sulphurates valued at £833 7s. 6d. Estimated value of the gold and sulphurates, £7684 11s. Cost at the mines, Medellin, and in London, £6759 17s. Estimate excess of returns, £904 11s. It will be seen from the letter of September 7 that the dry weather had continued, and that the effects were very marked. On October 5 the directors received a telegram as follows:—"Tias water here (Salida). Mine dry. Sinking resumed."—Eustice,

#### Murchison New Chum Gold Mines.

The directors have declared an interim dividend of 5 per cent. free of income tax, payable on the 15th of November to all the shareholders on the register on 31st October. The transfer books will be closed from the 1st to the 15th November inclusive.

The directors of BLACKETT'S CLAIM GOLD MINING COMPANY (LIMITED) inform us that Mr. J. Nelson, having resigned the office of secretary to this company, they have appointed Mr. E. Hamilton Burton, chartered accountant, secretary in his place, and have removed the offices to 16, St. Helen's-place, E.C.

We are informed that Mr. Thomas Harrison Davis, of 54, Old Broad-street, E.C., has been appointed a director of the LADY LOCH GOLD MINES (LIMITED) in place of Mr. Stewart H. Prell, who, by arrangement in July last, undertook to resign his seat in Mr. Harrison Davis' favour.

The directors of the NUNDYDROOG COMPANY have resolved "that an interim dividend (free of income tax) of 1s. 6d. per share be and is hereby declared, payable on November 23, 1895, to the shareholders on the books of the company on the 31st instant, and that the transfer books be closed during the said 31st instant."

It is notified that Mr. B. J. Fitzpatrick has been appointed secretary, *pro tem.*, of the NEW BULTFONTEIN MINING COMPANY (LIMITED), vice Mr. Clement Gibbs, resigned.

The CHAMP D'OR DEEP LEVEL GOLD MINING COMPANY, of 8, Old Jewry, E.C., notifies that an extension of time up to the 29th October, has been granted for receiving applications for shares of new working capital in the French Rand Gold Mining Company.

The FREE STATE MINES (LIMITED).—The first consignment of diamonds from the Leicester Mine being 527 carats, found in prospecting on the property of the Elansdrift Mining Company (Limited), and valued at £1000, have been received by the Free State Mines (Limited), who are the London agents of that company, may be seen by the shareholders of the Free State Mines (Limited) and others interested in the diamond in laundry at the offices of Mr. Julius Pam, 50, Holborn Viaduct, London, E.C., between the hours of eleven and one o'clock, Saturdays excepted.

The NEW CHIMES GOLD MINING COMPANY (LIMITED) notify that the certificates for shares of the Chimes West (Limited) are now ready for delivery, and can be exchanged against the application money receipts.

The DAY DAWN BLOCK AND WYNDHAM GOLD MINING COMPANY (LIMITED) has sold through Messrs. Johnson, Matthey, and Co. (Limited) bullion ex s.s. Duke of Westminster and Merkland, for £12,362 0s. 4d.

The JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY (LIMITED) announce that the dividend warrants for the dividend at the rate of 40 per cent. per annum were posted on Thursday evening.

At a meeting of the ANGLO-FRENCH EXPLORATION COMPANY OF WESTERN AUSTRALIA (LIMITED), held at 79, Queen-street, E.C., a first interim dividend of 5s. per share (less tax) on the ordinary shares, being at the rate of over 100 per cent. per annum on the paid-up capital, was declared out of the profits arising from the company's operations since its incorporation in May last. Warrants for dividends on the ordinary and deferred shares will be posted on the 28th inst.

At a meeting of the directors of the ANGLO-GERMAN EXPLORATION COMPANY OF WESTERN AUSTRALIA (LIMITED), held at 79, Queen-street, E.C., a first interim dividend of 5s. per share, less tax, on the ordinary shares, being at the rate of over 100 per cent. per annum on the paid-up capital, was declared out of the profits arising from the company's operations since its incorporation in May last. Warrants for dividends on the ordinary and deferred shares will be posted on the 28th inst.

To-day (Saturday) the first batch of allotment letters in the ENNA COMPANY will be posted.

The directors of the UNITED AFRICAN COLLIERIES (LIMITED) have appointed Mr. J. Nevins, of Wakefield, late manager at South Hiendly Collieries, Yorkshire, as manager of the collieries in South Africa, who sails for his destination on November 2 next.

It is announced that Messrs. Douglas Cairney, Wm. D. Cairney, and David Macgregor, all of Glasgow, have joined the Scottish board of the Auriferous Properties (Limited).

At a meeting of representatives of the ENGLISH NITRATE COMPANIES, held at the offices of the Permanent Nitrate Committee yesterday (the Lautaro Company not represented), the draft of an agreement for the regulation of the production and exports of nitrate of soda was unanimously accepted, subject to the adhesion of all producers. The scheme received the strong support of representatives of the coast producers who were present at the meeting.

**THE SILATI GOLD MINING COMPANY.**—We are informed that the annual meeting of this company will be held at the earliest possible moment after the auditors, who have been for some time past engaged upon the books, have completed their work. The operations of the company have, we understand, been limited during the present dry season, with a view to the strictest economy, to the exploration and development of Laing's reef. The reef itself is said to be very well defined and full of pyrites, but has hitherto assayed poorly.

**A NEW STEAM PIPE.**—We hear that a wonderfully strong steam pipe has been invented by a Mr. Smillie, of Glasgow. It seems probable that the construction of the new "wire" guns suggested the idea to the inventor, the pipes, which are ordinary copper tubing, being bound round by steel wire. The wire is soldered to the copper tube by an alloy having a much higher melting point than superheated steam. The new pipe is said to have successfully resisted extraordinary pressures.

**NEW COLLIERY FOR SHIREBROOK.**—A new colliery is about to be sunk at Shirebrook. The preliminary stages towards sinking operations have already commenced. The colliery will be situated about a mile from Shirebrook Station, and on the western side of the Midland Railway.

## DIARY FOR NEXT WEEK.

Monday, October 28.

Spitzkop Farm Gold Company, Winchester House, 2.  
San Pablo Nitrate Company, Winchester House, 3.

Tuesday, October 29.

Kinsella Gold Mine Company, Winchester House, 2.

Wednesday, October 30.

New Queen Gold Company, Winchester House, 3.  
Hampton Land & Railway Syndicate, Winchester Ho., 230.

Thursday, October 31.

St. John del Rey Company, Cannon-street Hotel, 2.  
Montana Mining Company, Winchester House, 12.  
Glenrock Consolidated Co., Cannon-street Hotel, 12.

Friday, November 1.

Transvaal Gold Exploration Co., Cannon-street Hotel, 3.  
Chaffers Gold Mining Company, Winchester House, 11.  
Wealth of Nations (Limited), Winchester House, 230.

**C. PASS & SON (Limited), BRISTOL,**  
ARE BUYERS OF  
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS,  
ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c.  
and DROSS or ORES containing  
TIN, COPPER, LEAD, AND ANTIMONY.

**HENRY WIGGIN & CO. (Limited),  
NICKEL AND COBALT REFINERS,  
MAKERS OF BEST RED LEAD FOR FLINT GLASS  
MANUFACTURERS,  
BIRMINGHAM.**

**LAMBERT'S WHARFAGE CO.,  
PRINCE OF WALES DOCK, SWANSEA.**  
Ores, Mattes, Regulus, and Bars received and prepared for market.  
Copper, Lead, Tin, Spelter, and Pig Iron Received, Weighed, and  
Sampled, and Warrants issued against same.  
N.B.—Warrants are on Accepted List of London Metal Exchange.  
Regular lines of steamers from America, Europe, &c.  
Consign goods to Lambert's Cranes, Prince of Wales Dock, Swansea

### THE BUTE WORKS SUPPLY COMPANY

133, BUTE DOCKS, CARDIFF.  
Telephone : No. 45 (Post Office and National).  
Telegrams : Gethin, Cardiff.

**RAILWAY WAGONS** (New and Second-hand) for Cash, Redemption Purchase, or Simple Hire. Full particulars on application.

**EARTH WAGONS**.—75 side and end tipping, 30-inch gauge, new frame, and new tops, STEEL wheels and STEEL axles, £5 each, f.o.t. Cardiff.

**RAILS**.—Bridge, Flange, Double Head, and Bull Head, with or without fastenings.

**SLEEPERS**.—Wood and Steel for all gauges.

**LOCOMOTIVES**.—Six wheels coupled, by Manning, Wardle and Co., 12 inches by 17 inches, now at Cardiff; also six wheels coupled, by Avonside Engine Company, 14 inches by 20 inches, now near Cardiff; also six wheels coupled, by Sharp, Stewart, and Co., 17 inches by 24 inches, now near Cardiff; all recently thoroughly overhauled, and ready for instant work; cheap for cash, or three years' redemption purchase.

### COMPANIES AND LEGAL ANNOUNCEMENTS.

\* Advertisements are inserted in this column at the rate of 9d. per line with a minimum charge of 7s. 6d.

#### THE MYSORE GOLD MINING COMPANY (LIMITED),

6 and 7, Queen Street Place,  
London, E.C.  
21st October, 1895.

**A MEETING** of the DIRECTORS, held this day,  
IT WAS RESOLVED—  
“That an Interim Dividend (free of Income Tax) of 2s. 6d. per share be, and is hereby declared, payable on the 16th day of November, 1895, to the Shareholders on the books of the company on the 26th October, 1895, and that the Transfer Books be CLOSED during the said 26th October, 1895.

By order of the Board,  
I. CROCKER,  
Secretary.

#### THE NUNDYDROOG COMPANY (LIMITED),

6 and 7, Queen Street Place,  
London, E.C.  
23rd October, 1895.

**A MEETING** of the DIRECTORS, held this day,  
IT WAS RESOLVED—  
“That an Interim Dividend (free of Income Tax) of 1s. 6d. per share be, and is hereby declared, payable on the 23rd day of November, 1895, to the Shareholders on the books of the company on the 31st instant, and that the Transfer Books be CLOSED during the said 31st instant.

By order of the Board,  
I. CROCKER,  
Secretary.

### DOLCOATH.

#### STATUTORY MEETING,

#### CUTTING the First SOD of the NEW SHAFT, AND

#### BANQUET

To-Day (Saturday) OCTOBER 26th, 1895.

A SPECIAL SUPPLEMENT of “THE MINING JOURNAL” will appear with the issue of NOVEMBER 2, containing FULL REPORTS of to-day’s PROCEEDINGS, and a PLATE of a GROUP of the DIRECTORS.

#### THE IRON AND COAL TRADES’ REVIEW

With which is Incorporated

The Bulletin of the British Iron Trade Association.  
The IRON AND COAL TRADES REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coal Owners, &c., in all the Iron and Coal Districts. It is, therefore, one of the Leading Organs for Advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review : 222-225, Strand, W.C.

Remittances payable to W. SHAW.

# The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

An Illustrated Record of Mining, Metallurgical, Railway, Financial, Industrial, and Engineering Progress.

ESTABLISHED IN 1835.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE, published every SATURDAY MORNING, price SIXPENCE, is recognised throughout the World as being the oldest, most influential, and most widely circulated Journal devoted to the interests which it represents. It circulates

**ALL OVER THE WORLD.**  
Amongst Mine Owners, Capitalists, Investors, Mining, Metallurgical, Railway and Mechanical Engineers, Railway Administrators, Manufacturers, &c., &c.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE has correspondents and sources of information in almost every quarter of the globe. Its policy is absolutely independent; its circulation is cosmopolitan; and its literary scope embraces the entire field indicated by its title.

THE MINING JOURNAL is neither controlled, nor is any interest in it held or exercised, by any mine owner, speculator, or syndicate; and it is in no way connected with any share-dealing agency.

**TO CORRESPONDENTS.**—Letters on Editorial Matters, or containing literary contributions should be addressed to “THE EDITOR.” All matter intended for insertion must be written on one side of the paper only. The return of rejected manuscripts cannot be guaranteed. The Editor invites correspondence and items of news or information from readers in all parts of the World.

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The United Kingdom, £1 4s.;

Abroad, £1 8s;

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**TO ADVERTISERS.**—The following is an abbreviated Scale of Charges for Advertising :—Companies’ Prospects, £12 12s. per column, or £20 per page; Companies’ or Legal Announcements, 9d. per line, with a Minimum charge of 7s. 6d.; Sales by Auction, Publications, for Sale, Wanted, &c., &c., 5d. per line with a Minimum charge of 4s.

Displayed (Trade) Advertisements of 2 inches in depth (or more), Single Column measure, will be inserted at the following rates:—For 52 insertions 2s. 6d. per insertion for each inch in depth; for 26 insertions 3s. per insertion for each inch in depth; for 13 insertions 3s. 6d. per insertion for each inch in depth. Terms for special positions and contracts may be had on application.

**ADVERTISEMENTS** (which should in all cases be sent direct to THE BUSINESS MANAGER) can now be received for the forthcoming issue of THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE, on FRIDAY, at 18, FINCH LANE, E.C., up till 6 p.m., and at 3, DORSET BUILDINGS, SALISBURY SQUARE, E.C. until 9 p.m.

Editorial and Advertisement Offices:

18, FINCH LANE, LONDON, E.C.

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LONDON: OCTOBER 26, 1895.

### THE GOLD MINING INDUSTRY OF TASMANIA.

TASMANIA is a country which, like many another humble region, has not made itself greatly prominent in recent years. In our reviews of late of the progress of the gold mining industry in various parts of the world, we have furnished evidence of truly remarkable advancement, and shown that though the share market itself was greatly depressed, still the output of gold, far from diminishing, was rapidly augmenting. It is not a little remarkable that this progress should be so universal, and not confined to merely one district. Of course, it is impossible to give any adequate and convincing reason for this general progression. All we know is that it has taken place, and it behoves us, therefore, to make the most of it. Tasmania is a country not noted altogether for its gold mining wealth. Its reputation has to some extent been made by its tin and silver production. It seems, however, that gold is beginning to put its other two chief metals in the shade, for from the statistics for the past year, now to hand, it is notable that tin has decreased by 600 tons, and, although there has been an augmentation of the silver output, nevertheless it has not progressed to anything like the same degree as gold. This is the

gratifying feature of the mineral industry of Tasmania, and although it would be better, perhaps, for the world if silver, like tin, had decreased to some considerable extent, nevertheless, it is not unreasonable to anticipate that in the near future it may, perhaps, give way to a still larger production of gold.

During the past year more actual work was in progress throughout the colony than at any time hitherto. The number of miners employed was, and is, steadily on the increase, and though the low prices ruling for silver and tin to some extent affected the output, nevertheless the value of minerals and metals, including gold, exported from the colony during 1894, exceeded by £7000 that for the 12 months previous, which was the highest so far attained. There is nothing phenomenal in the way of discovery to record. It has been merely a general and gradual progression throughout the colony, consequent upon more favourable conditions for working. Prospecting has been actively carried on, and has been attended with satisfactory results. The famous Mount Lyell Mine is making very extensive preparations for putting out vast quantities of the ore which it is known to contain. The railway from Macquarie Harbour to the mine is in progress, some five miles being already completed. Reducing works are in course of construction, and already two very considerable townships have been established in the vicinity of the mine. At Zeehan and Dundas progress and development have been very satisfactory. Most of the mines in these districts have been sinking to lower depths, with most encouraging results. Here the output of ore has greatly increased. In the outlying parts several claims give much promise of becoming of great value. Unfortunately, the inaccessibility of these districts retard, in a great measure, the development of the mines, but efforts have already been directed to the removal of these obstacles, and there is no doubt that when light tramways and railways are constructed, they will facilitate in opening out a large extent of rich mineral country.

Coming, first of all, to the statistics of the gold output, the yield for last year was 58,301 ounces of a value of £218,629, against 43,391 ounces of a value of £162,703 for the year previous, showing a gratifying and encouraging increase of £55,921. This output is the largest since operations were commenced upon the field in 1880. The year which comes closest to it is 1881, when the output was 56,693 ounces of a value of £216,901. The year 1880 comes next, with an output of 52,595 ounces, of a value of £201,297. For the next 10 years the output was very irregular, and never came within sight of a value of £200,000; in fact, it was not until last year that this total was again reached. As a set-off against the great increase of 1894 it is not very encouraging to note that for the first six months of the present year the output has not maintained this remarkable improvement. For up to the end of June the output was 23,569 ounces, only, of a value of £88,383. We are unable to give any reason for this slight decrease, but the next six months may in all likelihood make up for it. As we have already noted, there is also a slight increase in the output of silver. The figures are as follows:—19,665 tons of a value of £196,800, against 18,469 tons of a value of £184,690. Tin, as already mentioned, decreased to the extent of 600 tons as follows:—4236 tons of a value of £275,340 for 1894, against 4874 tons of a value of £333,869. This will be welcome news to our friends in Cornwall who are patiently awaiting some decrease, however slight, in the world’s output of tin. Besides gold, silver, and tin, Tasmania is extremely rich in coal. It is also of a very good quality, and is likewise found in accessible positions. However, during 1894 there was a very slight and insignificant decrease in the output of this mineral. The figures are as follows:—30,563 tons of a value of £24,450 against 33,192 tons, of a value of £26,553, showing a decrease of 2103 tons. Tasmania has for many years now been noted for its tin and silver production. Its gold output has been less prominent. Now, however, a change seems imminent, and from the above figures there is every reason to look forward to a gradual increase in the output of this metal, thus placing Tasmania in a position to add considerably to the world’s output of gold.

### GLENCAIRN MAIN REEF.

In our comments upon the extraordinary change that has effected the Mining Market, we expressed it as our opinion, which we still hold, that it was a healthy symptom, and, far from doing the damage which many had predicted, it was more likely to confer considerable benefit upon the industry. If anyone has suffered it is the wild speculator, but it is to the bona fide investor we tender our advice, and it is he, if he will only keep calm and undisturbed, who may derive from the set-back in prices considerable advantage. We pointed out that the slump gave him an opportunity which may perhaps never occur again, or, if so, not until the dim and distant future. We advised him to make the most of his opportunity by purchasing shares and locking them up for investment. We have no reason to think, however, that investors have derived that benefit from our advice which we had fondly anticipated. They, too, to some considerable extent, have been panic-stricken, and, affected by the general contagion, they have thrown considerable blocks of shares on the market, thus further depressing prices. Now that a reaction has taken place, which is likely to continue for a long time, and which is likely to send up prices to the level which they reached only a few weeks ago, we are afraid that it is almost too late to tender them similar advice. However, there are still many opportunities which they might seize with advantage, and there are a great number of securities, whose prices are far below their intrinsic merits. One of these is the Glencairn Main Reef Company, a concern which has made such considerable progress during the past year that it is now regarded as one of the leading South African companies. The future of this company seems not only assured, but really magnificent. Dividends of a very large amount have been paid during the past 12 months, and there is

every likelihood that these will not only be maintained, but largely increased.

To give some idea of the remarkable progress that has been made, we might go back a little and give a brief account of the history of the company. It was formed in January, 1889, to work a portion of the Witwatersrand Gold Mining Company's mypeacht on the farm Driefontein, consisting of 12 claims, covering 102 acres on the Main reef; also a water right situate 1½ miles south of the property. The purchase consideration was £150,000. The capital of £175,000 was increased to £200,000 in December of the same year, and further increased to its present amount, £225,000, in May of last year. Crushing with 30 stamps commenced in November, 1890, and 20 new stamps started in February, 1891. In December of last year 20 more stamps were set running, making 70 in all. During 1891 5690 ounces of gold were obtained; during 1892, 10,305 ounces; during 1893, 15,914 ounces, and during 1894, 47,876. During the past year the net profit on the year's operations was £65,069 4s. 10d., compared with £32,529 1s. 4d. for the previous 19 months, thus showing the remarkable and gratifying increase of £32,540 3s. 6d. in 12 months, or about 100 per cent. Three dividends were declared during the year, which amounted to 27½ per cent., and absorbed the sum of £61,879. Large as this profit was, there is every reason to anticipate a far greater increase in future years, and to justify this assertion the following consideration will suffice. The directors have increased the number of stamps by 30, which are to commence working this month, thus making in all 100 stamps. The new cyanide works have been erected with all the latest improvements. These also are to start this month, and will be capable of treating 12,000 tons per month. As the augmentation of the profits was due to a great extent to the increase in the milling power, and to a far more considerable extent to the cyanide operations, it will easily be seen, now that both plants have been considerably added to, how much greater the profits may be expected to be. The value of the tailings increased nearly 2 dwts., and the profit derived from this source alone amounted to £40,680, the mill profit being £33,828. The average yield from the mill in the previous years was 7 dwts. 53 grains; last year it was 8½ dwts., thus showing an improvement of 1 dwt. Though the working costs are still high, nevertheless they are slightly less than they were during the year previous. There is room, however, for further reduction, and though the directors have not expressed any intention of introducing further economies, there is no doubt that their efforts will be directed towards this end in the future, as they have shown every evidence of being desirous to increase the profits from every source possible. In Mr. Pore they have an ideal manager, and there is not the slightest doubt that he will himself endeavour to see his way to further reducing the costs. The cost of mining development averaged 6s. 7d. per ton. Of course a reduction may in any case be expected when the whole 100 stamps are at work. The Chairman seems to think that this will probably be brought down to 2s. 3d. per ton, but we are afraid that this is so considerable a reduction as almost to be impossible. However, there is every probability of the costs going down to a reasonable figure. The cyanide costs seem even more excessive, but for this the Chairman gave a satisfactory explanation. They were due to the fact of the old cyanide plant being so far from the settling pits that the transport was very high, and the wear and tear on the trucks enormous, but the manager expects, when the additional plant is in working order, to reduce the costs quite 2s. per ton. This will mean a further saving of £12,000 per year.

The additions to the mill, cyanide and other plant, have cost during the year £47,000, but a further £20,000 will be required to complete them, which expenditure is to cease at the end of the present month. Another fact which is likely to add considerably to the future output, is the discovery that the middle reef is becoming payable in the 6th level. This reef, being worthless in the other levels, has not hitherto been worked. On the 6th level, however, it has been opened out and found to be 18 inches in width, with an assay value of 24 dwts. per ton. Of course, should this width and value continue on further development—admittedly this there is every indication—it will add materially to the life and value of the property. Bearing in mind the significance of the above figures, there is every probability, therefore, that the promise of the Chairman to pay increased dividends in the future will be realised, and as the Glencairn is one of the few mines that has not only maintained, but improved its average, the shareholders may be safely advised to stick to their shares, whilst those who desire to invest their superfluous capital in something solid and assured cannot do better than hasten to buy Glencairns.

## FOREIGN DEALINGS IN GOLD MINES.

THE advantages of internationalism in stock and share dealings, of which so much was heard in the early stages of the Kaffir "boom," have now given way in a large degree to the disadvantages. In those earlier stages Paris supported the London market for gold mining shares because the French investor was placing money in those concerns for the sake of the dividends. It is to the credit of his keenness that, while British capitalists were lamenting the scarcity of solid investments, and the impossibility of finding profitable outlets for their money, the Continental investor should have perceived the splendid opening for a return upon his capital which was afforded by the unparalleled development of the Witwatersrand gold deposits. This phase in the Parisian buying has, however, ceased for some time, as we have pointed out, to be the dominant factor in the South African "boom" on the Continent. The rise in prices resulting from the eager purchases of the small bulls, who, in Paris as in London, hang about the outskirts of the financial world. The effect of their entry was to introduce

an element of weakness, which has had its inevitable result in the recent fall in values. Brokers begin to hesitate when they see men of no substance dealing to the extent of many thousands sterling, and they are perfectly justified in taking measures to protect themselves against the risks involved. Apart from this, there has been in the past few months an extensive manufacture of more or less worthless shares to tempt the Continental investor. Many of these have been brought out by English company promoters without any appeal whatever to the British public. The shares have been handed over, *en bloc*, at a handsome figure, to syndicates of Continental capitalists. These latter have carefully "rigged" the market, and got out of the shares at enormous profits. When the shares were all "off-loaded" on the public, and the stimulus of the market manipulation was removed, the Continental investors found themselves in possession of scrip which it was quite impossible for them to sell. Under these conditions it is surprising, not that Paris has fallen away from its strong support of the South African mining market, but that it should have been so long before suffering this decline. We accept these general facts as the general explanation of the fall rather than the special occurrences to which they have been attributed, because it is short-sighted folly to pretend that there has been nothing unhealthy in the heavy buying in Paris of Transvaal gold shares. At the same time, there is no occasion to look upon the Kaffir market with anything like an unfavourable disposition. There is every reason to believe that the upward movement will go appreciably further so far as the genuine ventures are concerned. Stock, which has been manufactured by "bucket shop" keepers and reckless company promoters simply for the fleecing of the public, stands, of course, in a position of isolated debasement and hopelessness. The public is so hard to educate in any sound financial principle that it may go up again by clinging to the skirts of the next rise in good and honest values; but it should never be forgotten that to calculate upon this sort of chance is purely and entirely speculation. The best advice that can be given to the sensible investor in mining shares is that he should seize the opportunity offered by the present low prices to buy in the scrip of the magnificent concerns, which have made the Rand an entirely unique incident in the history of mining, or the great Deep Level enterprises whose richness is testified to by the most eminent of living mining engineers. There can be no doubt that the dividend-paying Main reef miners will continue to advance until they have reached a considerably higher figure than that at which they now stand. The dividends paid by the Witwatersrand mines last year amounted to about £1½ millions sterling; in the first six months of this year they have already exceeded a million. There are also many other mines on the Witwatersrand, and some in the outlying districts, which, though not yet paying dividends, possess properties on payable ground, and are honestly and efficiently managed. The "slump" is the Nemesis of the "weak bulls," but it is, after all, the opportunity of the *bona fide* investor. It is worth remembering that the gold output of the Witwatersrand will be, by the end of the century, at least double the nine millions or more which it will total for 1895. Such prophecy upon the uncertain future of gold mining is no doubt always dangerous, but the facts and technical opinions upon which it is based are so authoritative that no hesitation can be felt in accepting it as a mere anticipation of the inevitable.

## NOTES AND COMMENTS.

WE are pleased to see that encouraging reports are being received from the manager of the mine in West Australia, which was acquired some months ago by the Flagstaff Company. At the time the property was purchased it will be remembered that very favourable opinions were passed upon its prospects by one or two experts, and that consequent upon this, great hopes were entertained that, in a short time, the shareholders would receive such returns as would compensate them in some measure for the patience they exercised, and disappointments they experienced, during the long and unsuccessful career of the old company. It will also be recollected that we ourselves formed a favourable opinion of the property; but, of course, like everyone else, we had to be guided solely by the reports published in the prospectus. It is, therefore, all the more gratifying for us to see that the operations of late have resulted so satisfactorily, and though, of course, it gives no complete assurance that the future is destined to be one of great success, nevertheless, it is sufficient to build encouragement upon. The latest information is contained in a circular which, during the past week, was issued by the directors to the shareholders of the company, and which contained extracts from the various reports and cablegrams sent over by Mr. Wright, the manager. Perhaps the cablegram received so late as the 17th inst. is the most encouraging. It is as follows:—"A trial crushing of 16 tons has yielded 23 ounces of retorted gold. The gold is very fine, and most difficult to save. An average sample of tailings assayed 2 ounces to the ton." It is expected that further crushing will shortly be reported, and Mr. Wright considers that the mine has now proved sufficiently productive to furnish ore for 30 stamps instead of 10.

THE acquisition by the Exploration Company, as the result of an elaborate succession of negotiations, of a one-fourth holding in the Anaconda Copper Company, and the subsequent introduction of the shares upon the English market, may have more momentous effects upon the future of copper prices than at first sight would be gathered. Nobody at all conversant with mining matters will need to be told of the high importance in relation to copper values of any change in the management and policy of so large a copper producer as this company. Montana easily maintains the premier position among the many large copper-producing States in the American Union, and Anaconda

has gained a pre-eminence as undisputed among the mines in that State. Notwithstanding a severe restriction of output during several months, in consequence of a policy determined upon in the autumn of last year, the output for the 12 months ending last December recorded a substantial advance of 20,000,000 lbs. upon the previous year. From the point of view of those concerned in the maintenance of a high or low level of copper prices, the important question of the hour will be whether the vital change just consummated in the Anaconda proprietary will lead to any corresponding difference in its policy of output. Not many weeks ago we reverted for a moment to a rumoured copper combination, and the attitude of the Anaconda Company in relation to any scheme for artificially influencing the copper market is necessarily one prime factor in this problem, seeing that without their countenance and support no "corner," as it is phrased, could hope to succeed. The supervision of the company's operations seemed, during the last year or two, to take a decided turn for the better. Several of the older portions of the plant have been renewed, and though there is still room for improvement in this direction—notably in the matter of hoisting machinery—the company's plant is now a distinct advance upon what it was some months ago. Whether these changes precede, and to an extent foreshadow, a more decided action on the company's part in regard to the copper market, is an interesting question that no one outside the charmed circle of Anaconda directors and management could undertake for a moment to answer.

THE economical and social philosopher, at present revolving the merits, or rather the demerits, of the eight hours proposal in its application to coal miners, may usefully apply himself to consider the interesting address delivered a short while ago by Mr. Emerson Bainbridge, M.P., before the Midland Counties Institute of Engineers. As most people who have thought and read about the subject are aware, Mr. Bainbridge is an uncompromising opponent of any restrictive measure of the sort, and the arguments by which he supports his position are sufficient evidence that he does not speak without experience and thought. No doubt the legislator who, in one brilliant flight of imagination, "bodied forth" the idea of a widely-applying Eight Hours Bill, originally conceived in his mind the ideal picture of a poorly-fed and poorly-clad coal miner working six days a week, from cock-crow to an advanced hour of night, imperiously dominated over by the bloated capitalist. Here, as elsewhere, the real differs largely from the ideal. Authoritative estimates proclaim the rather startling fact that in the Midland coal field the miners are now averaging three and a-half days' work a week, as against five days in South Wales, while from Yorkshire coal owners are complaining that the men will not do work that is open to them. It is at once patent that this indisposition to work on the men's part must press heavily upon the coal industry, for establishment charges at the different collieries necessarily remain largely the same, whether the working week comprehends three days or six. It is difficult to escape the conclusion that, although prompt at any time to demand an increase in wages, whether times are good or bad, the average coal miner cares little or nothing for the broad interests of the industry upon which his livelihood depends.

A PASSAGE in one of the leading papers of the Western States of America deplores the lack of enterprise prevailing in West country mining. This certainly will be news to many. One is so used to hear of the Americans as a "go-ahead" people, who regard obstacles as rather more of an incentive than a hindrance, that this new view of their commercial characteristics comes with the refreshing stimulus of novelty. But the writer does not stop at speaking thus deprecatingly of his countrymen; he even goes out of his way to applaud "Transatlantic enterprise," and to hint not obscurely that the greater improvement of trade and industry generally noticeable in the old world is due to this deserving quality. Englishmen who are used to the uncomplimentary criticisms of American writers will with difficulty keep from blushing as they read this eulogy. Like the man who was buried under an unfortunate misapprehension, and who, upon being resuscitated, was overwhelmed with modest confusion on reading his epitaph, John Bull may certainly be expected to take off his coat and work hard in the endeavour to deserve the praise of his cousins over the water. The circumstance which led the San Francisco writer to speak thus glowingly of our enterprise and initiative was the unfortunate failure of a promising mining venture at Arizona, owing to a lack of water. The journalist in question says that this would not be allowed to bar the progress of Englishmen in Australia, and for this very kind remark we freely forgive him for using that terribly-hackneyed illustration about Mahomet and the mountain.

IT almost seems that one of the dangers against which mining operations in the colonial gold fields will have in the future to contend is the possibility of fire, which, unless the budget of accidents recently recorded in the foreign and colonial press is altogether exceptional, is a very probable contingency, indeed. The Australian papers to hand recount quite a chapter of conflagrations in various parts of the world. Another fire occurred a short time since at the Broken Hill Proprietary ore-dressing works, and was only prevented from spreading to a serious extent by the prompt action of the watchman; the Blue Mountain according to a telegram, have been devastated by fire from Penrith to Mount Victoria; while the Osceola Copper Mine at Michigan is reported to have suffered so severely from flames that some 30 miners were entombed in the general confusion. In most cases the cause of fire is enveloped in the completest obscurity. The use in many cases of dynamite and other explosives may afford a possible explanation, but since some of the conflagrations appear to have originated in places beyond the ordinary spheres of working, this suggested explanation does not apply universally. If for nothing else, it would be satisfactory to trace the genesis of these fires in order to diminish, if possible, the contributing causes.

SIDE by side with the development of the mining industry, another outlet for British capital is being afforded by the mining boom at Johannesburg. Building there is just now a lucrative occupation. Steamers are continually arriving and discharging their loads of passengers, who cheerfully book through to Johannesburg, untroubled by any anxieties as to the possibility of being crowded out of hotel accommodation. The consequence is that, in this particular, Johannesburg somewhat resembles a popular seaside place in the summer season, or an up-river town during the Henley week. The hotels are full to bursting point, and the annexes which are continually being added fail to keep pace with the increased demand upon their accommodation. A brief telegram in Monday's edition of the *Times* shows that the evils of overcrowding are becoming very much accentuated:—"There is a great influx of working people," says the correspondent cabling from Cape Town, "hundreds arriving by each steamer. Nearly all of them go straight to the Transvaal, but numbers also are leaving the colony for the Transvaal." It is impossible to suppose that the evils will remain of that domestic nature occasioned by a deficiency of house-room. This flocking of workpeople into the Transvaal certainly suggests that the future will bring all the evils of an aggravated glut of the labour market. No doubt the Transvaal can find room for large numbers of workmen, but the demand is principally, if not exclusively, for labour of the skilled type; and it is simply fatuous to suppose that men wholly unaccustomed to any particular branch of adept labour will immediately find employment in a country whose chief industries are almost wholly an affair of experts. People who have knowledge and experience of working in mines need not fear to trust their fortune in a country with so great a possibility of development. Our remarks are addressed rather to those who are without technical skill of any kind, and who may be induced by exaggerated rumours to suppose that they have only to put in an appearance at Johannesburg to find immediate employment.

**M**INING, as an employment provided by the State for its convicts, has been from time to time the subject of much discussion, and a good deal of pity has not infrequently been expressed for those unhappy beings, doomed to labour year after year in the dark recesses of the metalliferous earth. Russia, in this, as in some other not unimportant respects, has gained an unenviable notoriety for the extent to which convict mining is carried on in the more northern parts of the Empire, no less than for the peculiarly hard conditions to which the criminals themselves are subjected. It is, therefore, a relief to turn, for the moment, to the brighter side of the picture, and to read of the workers in the Pratt Coal Mines, Birmingham, Alabama, who have been provided by a philanthropic State with the opportunity of increasing the total of the world's riches, as well as of expiating to some degree the evils of a criminal past. Life for these involuntary miners is not at all destitute of social joys. These men, most of whom are coloured, are given the pleasure of social entertainment,—dancing, concerts, and minstrelsy. The official and economical aspects of this system are worth a great deal more consideration than we have the space to afford them. At first sight, the peculiar advantages accruing to the State from this mode of employing convicts seem to place it altogether beyond question; but, on closer examination, it may, perhaps, be found to be a matter of doubt whether in other ways—such as weakening the deterrent to crime—the system may not be a bad one.

**H**ERE, on the face of it, is good news for school teachers. An advertisement in *The Times* runs as follows:—"Applications are invited for the posts of teachers in elementary schools in the mining district of Johannesburg, South African Republic. Salaries commence at £150 to £180, with annual allowances proportioned to quality of work done. Passage out paid. Applicants must be single, and have had several years' training, be in perfect health, and be prepared to sign a contract to serve for three years. Apply, enclosing full particulars and copies of testimonials, together with photo, to Director-General, Council of Education, Box 809, Johannesburg, S.A.R." In view of the seemingly princely salaries here offered, in comparison with those paid by our School Boards, we shall anticipate applications being sent in by the thousands. It will be observed that the advertisement omits to define the number of teachers required. One cannot gather whether it is half-a-dozen or a thousand. Applicants must, however, bear in mind that the cost of living in Johannesburg is excessive, and that a salary of £150 there is equal to about half that sum in England. At any rate, it is difficult to make any kind of living under £2 per week. Although it would likely be a good speculation for those in the condition of bachelors, nevertheless to intending bachelors the prospect is not altogether attractive.

**F**URTHER evidence of the improvement in business on the other side of the Atlantic is furnished in the latest mail reports from the manufacturing centres. Although there has been some temporary suspension of the upward movement in iron and steel prices, yet the reaction has not been of sufficient importance to make any material impression upon the better conditions prevailing in other directions. Business is said to be still steadily expanding in nearly every direction. This month sills aggregating 150,000 tons of steel rails have been made to the railroads at the regulation price fixed by the Association of Steel Rail Manufacturers some time ago. Deliveries on these orders are to be made early in December through the first few months of next year. The combination of steel rail makers has decided to continue the present price of \$28 for standard sections through next year. The slight reverse in manufactured iron and steel prices has, it is asserted, only resulted from the moderation in demand owing to forward requirements being so completely covered. It is satisfactory to note that in most other classes of manufactures the demand continues to increase, and reports coming in from the chief centres of trade are more reassuring than they have been for

many months back. The complete subsidence of the silver agitation has proved of invaluable assistance in restoring trade confidence, and the recent cessation of gold exports has removed one other disturbing influence from the path of business revival.

## THE MINING MARKET.

FRIDAY EVENING.

A strong revival on the eve of the Settlement, following a scare of disturbing proportions.—A cheerful feeling in the Westralian Market.—Miscellaneous neglected.

**D**URING the past week the Mining Market has been submitted to one of the severest tests within the memory of experienced authorities. As we indicated last week, a determined bear raid was made upon the Kaffir Circus as soon as dealings for the current account commenced. The operators for the fall had many things in their favour. Not only was there an unwieldy bull account in London, but in Paris speculators had been undertaking engagements far in excess of their means and credit. So long as prices were moving merrily upwards there was not much indication of the real state of affairs, but when the turn came, and brokers had to look to their own protection, the sacrifice was on an enormous scale. No harm would have accrued to the market, provided that the liquidations had been confined to shares which were being carried-over, or held on borrowed money. The transfer from weak hands to strong would have been a consummation devoutly to be wished. But the danger arose that real holders who had bought for investment would take fright in the general scurry, and throw their stock upon the market. To bring about this end the bears worked with unscrupulous ingenuity, and there is no disguising the fact that many of the so-called leaders, either directly or indirectly, lent a helping hand. Firms which should have been conspicuous in their efforts to check the panic stood aloof, and allowed it to be said that they were careless of the interests of the people who had followed them. Matters had reached a crisis by mid-day Wednesday. The fall was then so serious that it appeared to be touch-and-go with the market. It was evident that a further collapse would involve differences at the settlement, which meant ruin to speculators, brokers, and dealers. But, as the adage has it, "It is always darkest before dawn." A strong combination came into the support of the market, and prices took a sharp turn. The magnitude of the bear account has proved the safeguard of the position, and the repurchases of speculators for the fall have brought about such a recovery that the differences at to-morrow's making-up may be faced with comparative equanimity. Now that the crisis is over it is to be hoped that the public will appreciate its lesson. There has been far too much readiness on the part of brokers to allow their clients "to over-run the constable." Purchasers of the better class shares who have paid for them and can afford to wait patiently for their profit, are likely to come out of the fray unscathed. But now, more than ever, is excessive speculation to be discouraged, for it is only too probable that the bears will return to the attack as soon as they see their way.

The special Settlement in Barnato Bank shares was brought to a conclusion on Monday, and when the necessity for interested support disappeared, the Kaffir Circus at once developed signs of decline, which were aggravated as the day proceeded. West Australians shared in the dullness, and prices were allowed to sag away. The only cheerful feature was some influential buying of Indian Gold shares. On Tuesday the Stock Exchange was given over to unrelieved depression in all departments. A steady downpour of rain was in itself enough to insure flatness, and this was intensified by the stream of small realisations effected to the accompaniment of ostentatious bear selling. Wednesday morning saw the scare at its height. Bulls were closing and many real holders were sacrificing good stocks to provide the wherewithal for meeting differences on current engagements. Paris was a persistent seller, and some enormous lines of stock came over here for liquidation. Then it was that the big men stepped into the breach. Having secured sufficient cheap stock they sent their brokers into the market to bid up prices against the bears, who in their turn experienced a very unpleasant two hours. The stampede ended in the restoration of many of the leading fancies up to, or above, the previous night's closing. The message went round that, for the time at least, the game of wreckage was up. Panic gave way to confidence, and the market closed with a healthier appearance than it had worn for many days. On Thursday the confident feeling was maintained, and substantial gains scored in African specialties. West Australians were in increased demand, and gave evidence of a healthy undertone. This morning a certain amount of hesitation was shown, buyers and sellers alike standing aside pending a definite lead. Business improved during the last hour, and the close was strong. We have yet to see how far the speculative account has undergone alteration. Should the Contango rates to-morrow indicate an oversold position buoyancy will once more be the order of the day. It is to be hoped, however, that the provocation to bear attack will not re-appear. The future of the market depends upon the capitalist, not the speculator. It may be noted that Paris has followed the lead of London since the cessation of Wednesday's scare. Indefinite statements as to the formation of a strong bank, under the direction of the Syndic of the Coulisse, for the support of the mining section in Paris have been put about with re-assuring effect. When these statements take substantial form, the restoration of confidence will make further progress.

### South African Shares.

The Barnato Bank Settlement brought about two or three unimportant failures. It will be remembered that the making-up price was fixed at 2½, but this level was not long maintained. When the scare was at its worst, Barney Banks were sold down to 2½, the Consols at the same time dipping to 3½, and Johannesburg Investment to 4½. Messrs. Barnato Bros. came to the rescue with a flourish of trumpets, and to night's prices show a marked recovery, the Banks closing at 2½, Consols at 4, and "Johnnies" at 5. On the week the other Barnato stocks have not fared so badly. Buffels have gained ½ at 7, Croesus ½ at 2½, Glencairn ½ at 4, Kimberley Roodepoort ½ at 8, and May's ½ at 3½, whilst George Goch at 2½, Gibraltor at 1½, Primrose at 6½, and Rietfontein at 4½, are only ½ to the bad. Spes Bona have lost ½ at 1½. Knights were as low as 6½ at their worst, but recovered strongly to 7½, which is only ½ below last week's price. The Robinson group is also well maintained, Block B at 2½, Langlaagte at 6½, Randfontein at 3½, and Robinson Bank at 7½. The generally accepted explanation of the special flatness of Chartered is that the enormous sales were made by dealers who have taken option money for the end of November. Continental buyers had given for the put and call, chiefly in the

neighbourhood of 8, when the market was rising, view of having the call exercised against them. The turn of the tide rendered their position doubly disagreeable, for not only were they bulls on a falling market, but they were face to face with the certainty that the option holders would put the stock upon them. The break began on Monday, when Chartered lost ½ at 8½. On Tuesday the failure of a jobber increased the depression, and they left off no better than 5½. On Wednesday, at the height of the scare they were offered at 5½, but when the turn came they rallied sharply, and closed in the Street at 6½. The last price to-night is 6½. It may be noted that on Wednesday a broker received a selling order from Paris in 30,000 Chartered. Without going near the market, he telephoned to one of the big men who took the whole block at 6 for cash. This does not look as though any serious further decline was anticipated. The Paris special Settlement in East Rand was employed by the bear party as a "bogey" of terrible proportions. It does not appear, however, that any special difficulty was experienced on the Bourse in this connection. On the publication of a reassuring message by a Press agency on Monday the shares were rushed up to 9½, but when the break occurred they took a strong load in the downward movement, going below 8½ sellers. On Tuesday they touched 8 and on Wednesday were at one time as low as 7½, recovering strongly until 8½ was bid in the Street. The last price to-night was 8½, which is practically the same as a week ago. St. Angelo are ½ better at 5½ and Comets ½ down at 3½. Consolidated Goldfields Deferred have acted as a barometer to the market, more persistently, perhaps, than anything. There was not much doing in them on Saturday, when they closed firm at 17½. On Monday they went below 17, on Tuesday reached 16, and about noon on Wednesday were at their worst at 15½. The afternoon rally carried them to 16, and Thursday brought about a further recovery to 17½. The large amount of bear selling indulged in during the week ought to materially reduce the Contango to-morrow. The directors' report has been issued this evening after business hours. The last price of the shares was 17½, the same as a week ago. Sympathetically with these, Gold Fields Deep and Gold Trusts have moved up and down. The former were exceptionally good on Monday, scoring a gain of half a point at 10½. This was lost on Tuesday, and on Wednesday share changed hands at 9½, though the Street prices marked a total recovery. On Thursday they were largely bought and moved up to 11, which is to-night's price. The course of Gold Trusts was almost identical. The worst of them on Wednesday was 8½. On Thursday evening they were fully two points higher, and after touching 11 to-day they closed 3½ up on balance at 10½. Rand Mines have recorded some wide fluctuations, closing fractionally better at 36½, after rising to 38 and dipping to 35. Goldenhuis Deep have risen ½ to 9, Consolidated Deep Lynda ½ to 6½, and Champ d'Or Deep ½ to 3½. The Eckstein Stocks show up well after the scare. Simmers are a point to the good at 26, after being sold down to 23½. Salsiburys have gained ½ at 4½, City's ½ at 6, Heriots ½ at 10½, and Jumpers ½ at 7½; whilst Wemmers at 10½, Nigel at 6½, Jubilee at 9, and Ferreira at 19 are without alteration. Durban Roadsports have risen ½ to 8½, Kleintfontein ½ to 5½, Metropolitan ½ to 2½, and Robinson ½ to 10½. Special depression has been shown in the African Estate group. Minerva is finally ½ lower at 2½, and Orion ½ down at 3½. There has been practically no speculation in Shebas, which show a loss of ½ at 1½. Banties have risen ½ to 4½, Chimes have been very steady throughout, closing only ½ down at 2½. Some wide fluctuations have occurred in Transvaal Gold. The price stood on Monday at 8½, and at one time on Wednesday was no better than 6½. The last price, 8½, shows a net gain of ½. Spitskopshave recovered to 12, but most of the small Lydenburg shares are lower. Anglo French Exploration show a complete recovery at 5½. New Africans are finally ½ better at 7½, whilst Australis are only ½ to the bad at 11½, after touching 11½. The Van Ryn group is steady at previous prices. No useful end will be gained by traversing this market further. Suffice it to say that during the scare dealings were practically suspended except in such leading varieties as we have specified. De Beers and Jagers have moved rapidly on Paris advices. The former are finally ½ down at 29, and the latter ½ better at 9½. The rig in Beaconsfield has partially collapsed, the price being ½ lower at 1½. St. Augustines have lost 2½. 6d. at 11s.

### West Australians.

The West Australian market has emerged from the scare with much less wreckage than would have been the case had the speculative account been less curtailed. The difficulty of getting quotations continues as great as ever, but when one comes to dealing, the hardness of the market is at once apparent. Professor Schmeisser's report on the Fingall properties was received on Tuesday, and gave a fillip to the market. Great Fingall rose to 2½, but relapsed to-day to last week's price, 1½. Fingall Extended at the same time rose ½ to 1½. Hannan's Properties have all been in favour. Brownhills, on the strength of an announcement that a rich body of ore had been struck, closed nearly 2½ higher at 7½. Hannan's Reward is 1½ to the good at 4½, True Blues were sold down to 2½ during the slump, but close strong at 3 buyers. Great Boulders, in which there is more of a speculative account, close with a loss of ½ at 6½. Lady Locha have been attacked by the bears, and close ½ lower at 2. Hampton Plains, after receding to 4, are finally ½ down at 4½. Associated had a heavy fall in the early part of the week, but close with a firm appearance at 2½. Gold Fields are 7½, after being lower, whilst Menzies Properties are generally easier. Colonial Finances were very depressed at one time, receding under 4 premium and closing two points to the bad at 4½. London and Globe are ½ easier at 2½. On the whole the outlook in the Westralian Section is encouraging to holders.

### Miscellaneous.

There has not been much inclination to press business in Miscellaneous shares this week. Broken Hills are 2½ better at 2½, in response to the higher price of silver. The New Zealand group has stood ground fairly well, Waikato being finally ½ down at 6½, with Kapanga at 11s. Hauraki at 11s. 6d., and Royal Oak at 3s. 6d. Indian gold shares have been active, but the last prices are not the best. They, however, would cover the biggest of the falls. In copper shares the decline is general, though unimportant. Tintas have lost ½ at 18½, having moved at the bidding of the Paris Bourse.

### British Mines.

Very little business of any sort has been done in the Cornish markets during the week, but to-day a better feeling is prevalent in consequence of a slightly higher price. In tin, Dolcoath are 17s. 6d. to 18s., but it would not be an easy matter to buy or sell any number at these rates. It is generally expected that a very satisfactory report will be presented on Saturday. There are sellers of the partly-paid shares at 5s. 3d. Killafrothas are steady at 10s. At South Crofty to-day a call of 4s. per share was made, and an intimation was sent to the lord that unless he would consent to grant a new lease at 1s. 10d. dues, when his



# "THE MINING JOURNAL" SHARE LIST.

**ABBREVIATIONS AND REFERENCES.**—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay.*, Antimony; *A.*, Arsenic; *Bz.*, Borax; *C.*, Copper; *D.*, Diamond; *G.*, Gold; *I.*, Iron; *L.*, Lead; *M.*, Manganese; *N.*, Nitrates; *P.*, Phosphate; *Q.*, Quicksilver; *R.*, Ruby; *S.*, Silver; *S-L.*, Silver-lead; *Sul.*, Sulphur; *T.*, Tin; and *Z.*, Zinc. "in the "Amount of Share" column of British Mines signifies that the mine is conducted on "Cost Book" principles; I in the "Head Office" column of African Mines signifies that the address given is not that of the head office, but of a sub, or transfer office; and I, following the names of African Mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

\* The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it is understood that, while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

## AFRICAN MINES.

Name.	Closing Price, Oct. 25, 1895	Closing Price Oct. 15, 1895	Am't. of Share	When last XD and Dividend.	Called up Per Share	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
Abercorn Reef ...G	1/2 1/3	-/9 1/3	\$ 2.	—	2 4 0	—	Millwood	16, Tokenhouse Yard Broad Street Avenue.
Abbott's Con. Nels.	1/2 1/3	1/2 1/3	1 0	—	1 0 0	130,000	De Kaap	11, Poultry.
African Alluvial ...	13/2 1/3	13/2 1/3	1 0	—	1 0 0	30,000	Mosambik	
" Coal ...	5/2 5/6	5/2 5/6	1 0	—	1 0 0	15,000	Middleburg	19, Sth. Switn's-lane
" Estates ...	2 2/3 x rts	3/2 3/3	1 0	10 p.c. Sept. '95	1 0 0	438,403	"	4, Drapers-gardens.
" Consolid't. G	3/2 3/3	3/2 3/3	1 0	—	1 0 0	200,000	"	4, Drapers-gardens.
" Gold Con.	3/2 3/3	3/2 3/3	1 0	20 p.c. Jan. '95	1 0 0	300,000	Mossel Bay	3, Cophall-buildings
" Gold Ryco.	23/2 23/2 xd	23/2 23/2 xd	1 0	2/ Oct. 16 '95	1 0 0	175,000	23, College Hill,	16, Tokenhouse-yard
Afrikaner ...G	13/2 2/3	13/2 2/3	1 0	—	1 0 0	40,000	Transvaal.	23, College Hill,
Agnes Block ...G	7/2 9/2	5/2 5/2	1 0	—	1 0 0	78,507	Transvaal.	Transvaal.
Alexandra Estate ...G	15/2 15/2	15/2 15/2	1 0	—	1 0 0	225,000	54, Old Broad-street.	54, Old Broad-street.
Anglo-French Exp.	5/2 5/2	5/2 5/2	1 0	15% Aug. 29 '95	5 0 0	33,300	Warford Court, E.C.	170, Winchester Ho.
" Matabeleland	4/2 5/2	4/2 5/2	1 0	—	1 0 0	39,750	Winchester House.	120, Bishopsgate st. W.
Appantoo ...G	13/2 1/3	13/2 1/3	1 0	—	1 0 0	65,000	West Cost	8, Old Jewry.
Aurora ...G	13/2 1/3	13/2 1/3	1 0	—	1 0 0	100,000	Rand.	1, Grace Square.
" West United	8/2 2/3	2/2 2/3	1 0	—	1 0 0	580,000	Rand.	85, Gracechurch-st.
Balkis Ersteling	8/2 8/2	8/2 8/2	1 0	—	1 0 0	150,000	Transvaal.	85, Gracechurch-st.
Balmoral M. R. ...G	23/2 3/2	23/2 3/2	1 0	—	1 0 0	158,750	5, Old Broad-street.	7, Lothbury.
Banquet ...G	7/2 8/2	7/2 8/2	1 0	—	1 0 0	200,000	Johannesburg.	17, Basinghall-street.
Bantjes Consol ...G	4/2 4/2	4/2 4/2	1 0	rts Sep 24 '95	1 0 0	63,000	Warnford-court, E.C.	19, St. Swithn's-lane.
Barnato Bank ...G	2/2 2/3	2/2 2/3	1 0	—	1 0 0	—	1, Old Jewry.	1, Old Jewry.
Barnato Consol ...G	13/2 1/3	13/2 1/3	1 0	—	1 0 0	1,000,000	De Kaap	1, Drapery gardens.
Barrodt. ...G	12/2 13/2	12/2 13/2	1 0	—	1 0 0	39,900	De Kaap	17, Basinghall-street.
Beobuanaland Exp. ...G	2/2 2/3	2/2 2/3	1 0	10 p.c. May '95	1 0 0	400,000	Beobuanala	19, St. Swithn's-lane.
" Trad. Co.	1/2 1/3	1/2 1/3	1 0	—	1 0 0	100,000	Potchefstr.	5, Old Broad-street.
Ben Trovato ...G	1/2 1/3	1/2 1/3	1 0	—	1 0 0	483,225	Kaap Rivr.	7, Lothbury.
Big Golden Quarry	1/2 1/3	4/2 5/2	5/2	—	1 0 0	535,000	Rand.	1, Old Jewry.
Blood " B" Lang.	2/2 2/3	2/2 2/3	1 0	—	1 0 0	2,000,000	Transvaal.	120, Bishopsgate-st.
Bonanza ...G	1/2 1/3	1/2 1/3	1 0	—	1 0 0	95,000	Transvaal.	10, St. Helen's Place
Boosven Land ...G	34/2 36/2	42/2 45/2	5/2	—	1 0 0	50,000	Transvaal.	15, St. Swithn's-lane.
Brand Kumulu ...G	6/2 6/2	6/2 6/2	1 0	—	1 0 0	2,000,000	Transvaal.	1, Drapery gardens.
Brit. S. Char.	6/2 6/2	6/2 6/2	1 0	—	1 0 0	2,000,000	Transvaal.	17, Basinghall-street.
Buffelsdoorn ...G	7/2 8/2	7/2 8/2	1 0	10 p.c. May '95	1 0 0	250,000	Transvaal.	19, St. Swithn's-lane.
" Consolidated	1/2 1/3	1/2 1/3	1 0	—	1 0 0	—	5, Old Broad-street.	5, Old Broad-street.
Buluwave Synd. ...G	3/2 4/2	3/2 4/2	1 0	—	1 0 0	225,000	Transvaal.	5, Old Broad-street.
Cape Asbestos ...G	2/2 2/3	2/2 2/3	1 0	1/3 Jun. 12 '95	1 0 0	50,311	Transvaal.	120, Bishopsgate-st.
" Copper ...C	2/2 2/3	2/2 2/3	1 0	1/3 Jun. 12 '95	1 0 0	300,000	Transvaal.	10, St. Helen's Place
" 5% Pref.	2/2 2/3	2/2 2/3	1 0	1/3 Jun. 12 '95	1 0 0	45,000	Transvaal.	15, St. Swithn's-lane.
Cassel Coal ...G	1/2 1/3	1/2 1/3	1 0	10 p.c. July '95	1 0 0	75,000	Transvaal.	1, Old Jewry.
Gen. de Kaap ...G	2/2 3/2	2/2 3/2	1 0	—	1 0 0	12,000	Transvaal.	1, Old Jewry.
Gen. Montrose ...G	8/2 9/2	8/2 9/2	1 0	—	1 0 0	69,806	Transvaal.	1, Old Jewry.
Champ d'Or ...G	3/2 3/2	3/2 3/2	1 0	4/ Jan. 31 '95	1 0 0	116,186	Transvaal.	1, Old Jewry.
Charterland G.F. ...G	1/2 1/3	1/2 1/3	1 0	—	1 0 0	150,000	Transvaal.	1, Old Jewry.
Chimes West ...G	2/2 2/3	2/2 2/3	1 0	—	1 0 0	150,000	Transvaal.	1, Old Jewry.
City and Sub.N.W.G	5/2 6/2	6/2 6/2	4 0	10-June '95	4 0 0	340,000	Transvaal.	1, Old Jewry.
Coetzestroom ...G	8/2 9/2	8/2 9/2	5/2	—	1 0 0	140,000	Transvaal.	1, Old Jewry.
Con. Bultfontein D	31/2 32/2	31/2 32/2	1 0	3/2 Sept. '94	1 0 0	721,500	Transvaal.	1, Old Jewry.
Con. Deep Levels ...G	6/2 6/2	6/2 6/2	1 0	4/2 July '95	1 0 0	187,500	Transvaal.	1, Old Jewry.
Con. G. Fields S.A.	17/2 18/2	17/2 18/2	1 0	1/2 Dec. 29 '94	1 0 0	1,250,000	Transvaal.	1, Old Jewry.
Do. 5% Pref.	24/2 25/2	24/2 25/2	1 0	7/1-June '95	1 0 0	1,244,999	Transvaal.	1, Old Jewry.
Do. 5% Deben.	11/2 12/2	11/2 12/2	5/2	5/6 Oct. '95	5 0 0	600,000	Transvaal.	1, Old Jewry.
Crown Deep ...G	10/2 11/2	10/2 11/2	1 0	—	1 0 0	250,000	Transvaal.	1, Old Jewry.
Crown Deep Consol. D	29/2 30/2	29/2 30/2	1 0	5/2-Jy 11 '95	1 0 0	120,000	Transvaal.	1, Old Jewry.
De Beers Consol. D	28/2 29/2	28/2 29/2	1 0	6/2-Jy 11 '95	1 0 0	789,751	Transvaal.	1, Old Jewry.
Do. 5% 1st Deb.	10/2 10/2	10/2 10/2	1 0	5/2-Jy 11 '95	1 0 0	45,000,000	Transvaal.	1, Old Jewry.
Do. 5% Bul. Ob.	10/2 10/2	10/2 10/2	1 0	5/2-X Oct. 95	1 0 0	720,000	Transvaal.	1, Old Jewry.
Doornkop ...G	3/2 3/2	6/2 7/2	1 0	—	1 0 0	250,000	Doornkop.	1, Old Jewry.
Draafonted ...G	3/2 3/2	3/2 3/2	1 0	3/2-Sep. 27 '95	1 0 0	175,000	Band.	1, Old Jewry.
Durban Roedopt. G	8/2 8/2	7/2 8/2	1 0	—	1 0 0	312,000	Band.	1, Old Jewry.
" Deep ...G	4/2 5/2	4/2 5/2	1 0	—	1 0 0	100,000	Band.	1, Old Jewry.
Eastleigh ...G	1/2 1/3	1/2 1/3	1 0	—	1 0 0	340,000	Klerksdrp.	1, Old Jewry.
East Rand ...G	8/2 8/2	8/2 8/2	1 0	10% Jan. '95	1 0 0	65,000	Transvaal.	1, Old Jewry.
Evelyn ...G	1/2 1/3	1/2 1/3	1 0	1/2-Dec. 29 '94	1 0 0	140,000	Transvaal.	1, Old Jewry.
Exploration ...G	4/2 4/2	4/2 4/2	1 0	13/2-Jy 26 '95	1 0 0	45,000	Transvaal.	1, Old Jewry.
Ferreira ...G	18/2 19/2	19/2 19/2	1 0	—	1 0 0	105,000	Transvaal.	1, Old Jewry.
Forbes Reef (N.W.)G	9/2 9/2	9/2 9/2	1 0	—	1 0 0	265,000	Transvaal.	1, Old Jewry.
Geidenhuis Deep ...G	8/2 9/2	9/2 9/2	1 0	6/2-Jy 28 '95	1 0 0	187,500	Transvaal.	1, Old Jewry.
Geidenhuis Est. G	5/2 5/2	5/2 5/2	1 0	1/2-Sep. 27 '95	1 0 0	150,000	Transvaal.	1, Old Jewry.
Main Reef ...G	1/2 1/3	1/2 1/3	1 0	—	1 0 0	112,750	Transvaal.	1, Old Jewry.
George and May G	2/2 2/3	2/2 2/3	1 0	—	1 0 0	100,000	Transvaal.	1, Old Jewry.
Goch ...G	1/2 1/3	1/2 1/3	1 0	—	1 0 0	130,000	Transvaal.	1, Old Jewry.
Ginsberg ...G	1/2 1/3	1/2 1/3	1 0	15/2-Jy 25 '95	1 0 0	200,000	Transvaal.	1, Old Jewry.
Glencairn ...G	31/2 32/2	4/2 5/2	5/2	—	1 0 0	200,000	Transvaal.	1, Old Jewry.
Gold Coast Devl. Estates T. G	1/2 1/3	1/2 1/3	1 0	15/2-Dec. 29 '95	1 0 0	130,000	Transvaal.	1, Old Jewry.
Golds Deep ...G	11/2 12/2							

"THE MINING JOURNAL" SHARE LIST—(Continued)

## AUSTRALIAN AND NEW ZEALAND MINES

## **NORTH AMERICAN MINES**

Name.	Closing Price, Oct. 25, 1895	Closing Price, Oct. 18, 1895.	Amt. of Share	When last XD and Dividend	Called up Per Share	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
Alaska Mexican...G	2 3/4	2 2/4	85	7 1-5d. July '95	85	160,000	Alaska....	30, St. Swithin's-in-
" Treadwell ...G	5 1/2 5/2	5 1/2 5/2	825	1/8 July '95	825	200,000	"	"
Almaden and T....S	1 1/3 1/3	1 1/3 1/3	2/8	-	0 2 0	351,000	Mexico ...	5, Queen-street-place
American Belle...S	1 1/3 1/3	1 1/3 1/3	1 0	-/6 Mar. '91	1 0 0	398,800	Colorado	254, Old Broad-street
Anglo Mexican...S	-	-	5 0	2/- Sep. '95	5 0 0	74,850	Mexico ...	23, College Hill,
Arizona (Pref.) Cu	53/ 53/6	57/6 58/	4 0	1/- July '95	4 0 0	158,920	Arizona ...	74, Geo-st., Edinbo
" 1/2 A Deben.	109	108/1 109	100/0	6 1/2 % May '95	100 0 0	125,300	"	"
" 1/2 B Deben.	98/2 99	100	100/0	7 1/2 May '95	100 0 0	151,300	"	"
De Lamar.....GS	10/6 21/6	11/6 15/6	1 0	1/Aug. 14 '95	1 0 0	40,000	Idaho .....	6, Draper's-gardens
Dickens Custer GS	1/9 2/3	1/9 2/3	1 0	-	0 19 9	420,000	"	Winchester Ho. E.C.
Elkhorn .....S	4/9 5/3	5/3 5/9	1 0	-/3 June 26 '95	1 0 0	175,007	Montana	6, Draper's-gardens
Emma .....S	-/8 1/	1/- 1/3	5/	-	0 5 0	403,818	Utah .....	15, Geo-st. Mansn. H.
Gen. M'g. Assoc. ....	5/6 7	6/6 7	5 10	14/- Apr. '95	5 10 0	27,483	C. Breton	Bloomfield House
Golden Feather G	3/4 3/4	3/4 3/4	1 0	-	1 0 0	180,000	California	S. Stephens Co E.C.
" Gate .....G	3/6 4/6	2/6 4/6	1 0	-	0 19 8	79,600	"	3, Draper's Garden
" Leaf. ....G	2/9 3/3	2/9 3/3	1 0	-	1 0 0	300,253	"	"
Harquahala....G	5/6 8/2	8/- 7/-	1 0	-/8 Oct. '94	1 0 0	300,000	Arizona ..	6, Draper's Garden
Holcomb Valley G	1/6 2/	1/9 2/	5/	-	0 5 0	540,000	California	14, Cornhill. E.C.
Jackson Goldfields	1/9 2/3	2/- 2/6	5 0	-	0 5 0	408,825	California	11, Poultry, E.C.
Jay Hawk (New) G	1/- 1/8	-/3 1/3	1 0	-/8 Dec. '92	0 19 3	285,000	Montana	Dashwood House,
La Plata.....S	2/6 3/-	3/3 3/9	5/	1/3 Oct. '92	0 4 5	405,000	Colorado	11, Poultry, E.C.
La Yerba.....GS	3/4 4/-	3/4 4/-	1 0	-	0 19 8	200,000	Mexico ..	20, Bucklersbury, E.C.
Mammoth Gold ...	1/- 1/8	1/ 1/8	1 0	-	1 0 0	400,000	Pinal, Ariz.	257, Winchester Ho.
Mesq. d'l Oro (P) G	-	-	5 0	-	5 0 0	10,000	Mexico ...	Dashwood Ho., E.C.
" (D) G	-	-	5 0	-	5 0 0	10,000	"	"
Montana....GS	5/6 7/6	8/5 9/6	1 0	-/3 Sep. 27, '95	0 19 0	657,158	Montana	Gresham House, E.C.
New Colorado ...S	-	-	1 0	-	0 19 5	34,503	Montana	8, Geo. Ho., Eches
" Gold Hill....G	-	-	1 0	-	0 19 9	191,045	N Carolina	15, George-st., E.C.
" Guston ...S	3/4 3/4	3/4 3/4	1 0	1/- Oct. '92	1 0 0	110,000	N Carolina	254, Old Broad-st.
" Hoover Hill G	-/6 1/7	-/6 1/7	10/	-/9 Dec. '95	0 10 0	120,000	N Carolina	Langthorpe Ho., E.C.
Palmarito .....GS	1/9 2/3	2/- 2/6	1 0	-	1 0 0	418,888	Mexico ...	32, Old Jewry, E.C.
Parral Cons. ....G	3/4 3/4	1/16 15/16	1 0	-	1 0 0	121,077	Palmerton Bldgs., E.C.	
Pinos Altos(Div) GS	3/4 3/4	3/4 3/4	1 0	-/6 Mar. '90	1 0 0	100,000	"	110, Cannon-street.
" 15% Cum Pref	3/4 1	3/4 1	1 0	-	1 0 0	60,000	"	"
Richmond ...GSL	% 1%	1 1/4	6 0	1/- Nov. '94	6 0 0	54,000	Nevada ...	44, Coleman-street.
Sierra Buttes ...G	3/6 3/6	3/6 3/6	2 0	-/5 Apr. 10 '95	2 0 0	122,500	California	135, Leadenhall-st.
Do. Plumas Eur. G	3/6 3/6	3/6 3/6	2 0	-/9 Apr. 10 '95	2 0 0	140,265	"	"
Springdale.....G	1/3 1/3	1/6 2/-	\$1	-/2 Sep. 26, '94	\$1	1,000,000	Colorado	20, Abchurch Lane.
Twin Lake Placers	1/4 1/4	1/4 1/4	0	3/- Feb. '95	1 0 0	26,000	"	5, Lawrence P. H.E.
<b>SOUTH AND CENTRAL AMERICAN MINES.</b>								
Auglo-Chilian P/N	8 1/2 9	9 9 1/2	10 0	13/11/15 Jun '95	10 0 0	35,000	Antofagast.	123, Bishop-st. W.
" 6% Ryat-Bell G	107 109	107 109	100/0	6 1/2 July '95	100 0 0	220,000	Antofagast.	"
Antioquia (ordiny)	-	-	1 0	7 1/2 Mai. '90	1 0 0	22,823	Colombia	184, Gresham Ho.
Bar Guiana Prop.	-	-	-	-	1 0 0	42,453	"	184, Gresham Ho.
Caratula.....G	-/9 1/3	1/- 1/3	2/8	-	0 2 6	1,330,000	Brit. Guan.	57, Moorgate-st. E.C.
Cayloma.....S	-	-	2 0	1/- Apr. '94	2 0 0	125,000	Peru	52, Leadenhall street
Colon.....G	-/9 1/3	-/9 1/3	5/	-	0 4 0	200,000	Colombia	5/9, Coothall-bdgz., E.C.
Colorado Nit. ....N	1/4 1	1/4 1	5 0	4/- May. '95	5 0 0	32,000	Chili .....	12, King-st., Liverpool
Colombia H.Y. ....G	15 5/6	15 5/6	20	10 frs. Aug. 94	20 0 0	75,000	Venezuela	10, Blomfield-street
Copiapo .....C	11/16 11/16	11/16 11/16	2 0	1/- Jy 26, '95	1 0 0	100,000	Colombia	Dashwood House, E.C.
Darien "A" ....G	2/3 2/3	2/3 2/3	1 0	1/8 May 24, '95	1 0 0	49,553	Colombia	Manchester.
Darien "B" ....G	3/4 4	3/4 4	1 0	-	1 0 0	30,000	"	"
Don Pedro.....G	2/6 3/6	2/5 3/6	1 0	-	1 0 0	133,102	Brasil ....	24-5, Devonsh.Ce.E.C.
El Callao .....G	3/4 3/4	3/4 3/4	5 0	9 1/2 d. Feb. '94	5 0 0	257,600	Venezuela	8, Bishopsgt.-st. W.
Frontino & B...G	1/3 1/3	1/3 1/3	1 0	8d. Oct. 16 '95	1 0 0	128,682	Colombia	184, Graham House
Glenrock .....G	1/9 2/3	1/6 2/3	1 0	-	1 0 0	199,945	Arg. (A.L.)	3-5, Queen-street, E.C.
Gravel.....G	3/6 4/6	3/6 4/6	1 0	-	1 0 0	100,000	Colombia	10, Blomfield-street
Guadalupe.....GS	3/6 5/6	3/6 6/	1 0	-	1 0 0	120,000	Honduras	1A, Union st. Old Brd
Huanchaca .....S	-	-	5 0	4/- Sept. '94	5 0 0	320,000	Bolivia ...	10, Avnu. d'Alma, Par
Javalli .....G	-	-	5 0	8 1/2 % '91	0 2 0	105,234	Nicaragua	139, Cannon-street.
Julia Taital ....N	3/6 5/16	3/6 3/6	1 0	-	1 0 0	22,000	Chili .....	79/2, Gracechurch-st.
Lagunas .....N	2/4 3/4	3 3/4	5 0	15 p.c. Dec. '94	5 0 0	120,000	Tapachapa	3, Gracechurch st;
Lautaro .....N	5 5/6	5 5/6	5 0	7/6 June '95	5 0 0	22,000	Chili .....	70,
Liverpool .....N	9/10 10%	10 11	5 0	15/- May '95	5 0 0	22,000	Colombia	Liverpool,
Loma .....G	1/3 1/3	1/3 1/9	3 0	3/4 3% Nov. '95	3 0 0	10,000	Chili .....	5, Coothall-building
London Nit. ....N	1/4 2/4	1/4 2/4	3 0	3 1/2 % Nov. '94	3 0 0	22,000	Chili .....	9, Gracechurch-st.
" Nit. (Pref.)	3/4 4/4	3/4 4/4	3 0	-	3 0 0	"	"	
Macate .....G	1/3 1/9	1/- 1/6	2/	-	0 2 0	200,000	Peru ....	11, Old Broad-st. E.C.
New Tamarugal N	3/6 3/6	3/6 3/6	1 0	1s. Dec. '94	1 0 0	130,000	Tapachapa	50, Lime-street, E.C.
" 8% Cum Pref	3/6 3/6	3/6 3/6	1 0	8 p.c. Feb. '95	1 0 0	130,000	"	"
" 8 p.c. Debts	7/7 8/2	7/7 8/2	100/0	8 p.c. Aug. '95	100 0 0	260,000	"	"
Orita .....G	1/3 1/9	1/3 1/9	1 0	1/- April '95	1 0 0	30,000	Colombia	10, Blomfield-street
Ouro Preto .....G	-	-	-	1/- Aug. '95	1 0 0	80,000	Brasil ....	5, Queen-street-place
Pae. & Jarapampa N	1/4 2/4	2 2/4	1 0	4/- May '95	5 0 0	72,000	Tapachapa	3, Gracechurch-st;
Primitiva .....N	3/4 3/4	1/3 1/3	2/8	2/8 Oct. '95	5 0 0	40,000	Chili .....	12, King-st., Liverpool
Quebrada .....C	3/4 3/4	3/4 3/4	5 0	5% Mar. '95	5 0 0	241,556	Venezuela	35, Nicholas Lane.
Mosario .....N	4/4 5/4	4/4 5/4	5 0	5% Apr. 14 '95	5 0 0	120,000	Chili .....	57%, Old Broad-street
" (5% Deb.)	10/10 10/10	10/10 10/10	5 0	5% Out. 15 '95	100 0 0	475,000	"	"
Do. HuaraDeb Corp	10/10 10/10	10/10 10/10	5 0	5% July 1 '95	100 0 0	200,000	Brazil ....	Pinsby Ho., Blmfd's
St. John del Rey G	1/3/4 1/3/4	1 1/3 1/3	1 0	10/7 June '95	1 0 0	323,930	Chili .....	12, King-st., Liverpool
San Donato .....N	1/4 1/4	1/4 1/4	2 0	2/2 May 24 '95	5 0 0	32,000	Colombia	9, Gracechurch-st.
" Jorge .....N	4/4 5/4	4/4 5/4	2 0	2/ Oct. 16 '95	5 0 0	75,000	"	"
" Pablo .....N	2 2/4	2 2/4	2 0	2/6 Nov. 14 '95	5 0 0	32,000	Chili .....	23, St. Swithin's In.
" Sebastian .....N	1/3 1/3	1/3 1/3	5 0	5/3 May '95	5 0 0	28,000	Chili .....	Dashwood HoouseE.C.
Santa Barbara ...G	-	-	10/	1/3 Dec. '95	0 10 0	50,000	Brasil ....	3, Gracechurch-st.
" Elena .....N	3/4 3/4	3/4 3/4	5 0	5/- Nov. 15 '95	5 0 0	22,000	Tapachapa	10/20,000
" Rita .....N	2/3 3/4	2/3 3/4	5 0	10/24 Jan '96	5 0 0	20,000	Chili .....	120,000
Segovia .....G	-	-	5/-	-	5/-	840	Colombia	"
" Ord. ....G	-	-	1 0	10% July '95	1 0 0	10,000	"	"
Tolima "A" ....S	7/4 8	7/4 8	1 0	10% July '95	1 0 0	14,000	Malaysia	18, Finsbury-circus.
" " B" ....S	5/4 6/4	5/4 6/4	5 0	10/- Jy 11, '95	5 0 0	6,000	"	"
Vic. & Alatiria ...	1/6 2/	1/6 2/	5/	5/-	0 5 0	200,000	Venezuels	Broad-st. Avenue.
" Pret. ....G	2/- 2/6	2/- 2/6	1/	-	0 1 0	1,725,585	Ban. Dmgo	110, Cannon-street.
West Indian....G	-	-	-	-	-	-	-	-
<b>INDIAN AND ASIATIC MINES.</b>								
Asia Minor Prof. Sl.	-	-	10/ 10/	-	0 10 0	42,450	Asia Minr	2, Metal Ex. Bldgs.
" Ord. ...	-	-	10/ 10/	-	0 10 0	59,858	"	"
Balaghat Mysore G	4/6 5/6	6/ 7/	1 0	-	0 19 0	159,945	India .....	8-7, Queen-street-pi.
Burma Ruby.....R	23/6 24/6	23/6 24/6	1 0	-	0 18 0	298,551	Burmah...	Suffolk House E.C.
Champion Reef...G	41/5 41/5	41/5 51/5	1 0	4/- Aug. 19 '95	1 0 0	200,000	India .....	8-7, Queen-street-pi.
Colar Central ...G	1/3 1/3	1/3 1/3	1 0	-	0 1 0	300,000	"	"
Coromandel.....G	9/4 11/4	9/4 11/4	1 0	-	0 17 6	95,000	"	8-7, Queen-st.-place
ToldFidsMysore G	21/6 22/6	24/ 25	1 0	1/- July '95	1 0 0	275,000	"	8-7, Queen-street
Hyderabad Deccan...	4/4 5	5 5/4	5 0	-	0 1 0	115,000	Deccan ...	16, St. Helen's-place
KempinkotsGdFd	2/- 2/6	2/3 2/9	5/	-	0 1 0	750,000	India .....	8-7, Queen-st.-place
Mysore .....	3/16 3/16	3/16 3/16	1 0	2/6 Jun 25 '95	1 0 0	248,354	"	"
My. Barnhalli ...G	2/ 2/8	2/- 2/6	1 0	-	0 18 0	100,000	"	2, East India Avenue
" Reefs ...G	9/6 10/6	9/6 10/6	1 0	-	1 0 0	160,000	"	8-7, Queen-st.-pi.
" West(N)G	15/16 15/16	18/16 19/16	1 0	-	0 19 0	127,408	Dashwood Ho., E.C.	"
" Wynnad G	15/16 1	18/16 10/16	1 0	-	0 19 0	125,000	"	"
Nine Reefs .....G	8/9 3/3	2/8 3/3	10/	-	0 10 0	250,000	"	8-7, Queen-st.-pi.
Nundydroog.....G	21/4 23/4	23/4 23/4	1 0	1/8 Jy 11 '95	1 0 0	200,000	"	"
Ooregum(Di.O.G) G	3 3/4	3/4 3/4	1 0	1/8 Aug 14 '95	1 0 0	145,000	"	"
" (10% Prof.)	3 1/2 3 1/2	4 4/ 4	1 0	1/8 Aug 14 '95	1 0 0	107,011	"	"
" (10% Prof.)	3/6 3/4	3/6 3/4	1 0	2/1 Aug 14 '95	0 5 0	12,969	"	"
Fahang Kabang T	3/6 3/6	3/6 3/6	1 0	-	1 0 0	200,000	Malay Pn.	4a, Jeffrey's sq. E.
Straits Developmt.	1/4 1/4	1/4 1/4	1 0	-	0 18 0	184,398	Pahang ...	15, Coothall Avenue
Terrakonda .....G	1/8 2/8	1/8 2/8	4/	-	0 1 0	157,491	Mysore ...	8-7, Queen-street-pi.

## INDIAN AND ASIATIC MINES

<b>Asia Minor Pref. St.</b>	—	—	10/ 1C/	—	0 10 0	42,430	<b>Asia Minor</b>	2, Metal Ex. Bldgs.
" Ord. ...	—	—			0 10 0	59,358	"	
Balaghat Mysore G	4/6 5/6	6/ 7/	1 0	—	0 19 0	159,945	India .....	6-7, Queen-street-pi
Burma Ruby.....R	23/6 24/6	23/5 24/6	1 0	—	0 18 0	299,551	Burmah...	Suffolk House E.C.
Champion Reef...G	41½/6 41½/6	41½/6 5½/6	1 0	1/- Aug. 15 '95	1 0 0	200,000	India .....	6-7, Queen-street-pi
Colar Central ...G	1/3 1/0	1/3 1/9	1 0	—	1 0 0	200,000	"	Dashwood Ho., E.C.
Coromandel..... G	9/6 11/6	9/6 11/6	1 0	—	0 17 6	95,000	"	6-7, Queen-st.-place
ToldFlids Mysore G	21/6 22/6	24/ 25	1 0	1/- July '93	1 0 0	275,000	"	6-7, Queen-street
Hyderabad Dec....	4½ 5	5 5½	5 0	—	0 10 0	115,000	Deccan ...	16, St. Helen's-place
Kempinkote GdFd	2/- 2/6	2/3 2/9	5/	—	0 2 8	750,000	India .....	6-7, Queen-st.-place
Mysore ..... G	31/6 33/6	33/6 35/6	1 0	2/6 Jun 25 '95	1 0 0	248,354	"	6-7, Queen-street pi
My. Barnhalli ...G	2/ 2/6	2/- 2/6	1 0	—	0 18 0	100,000	"	2, East India Avenue
" Reefs ....G	1/6 10/6	9/6 10/6	1 0	—	1 0 0	160,000	"	6-7, Queen-street-pl
" West(N)G	35/6 36/6	18/6 19/6	1 0	—	0 19 0	127,408	"	Dashwood Ho., E.C.
" Wynnad G	1½/6 1	18/6 19/6	1 0	—	0 19 0	125,000	"	"
Nine Reefs ....G	2/9 3/3	2/8 3/	10/	—	0 10 0	250,000	"	6-7, Queen-street-pi
Nundydroog.....G	21½/6 23½/6	23½/6 23½/6	1 0	1/5 Jy 11 '95	1 0 0	200,000	"	"
Ooregum (Dt.O.)G	3 3½	33½ 36½	1 0	1/- Aug 14 '93	1 0 0	145,000	"	"
" (10 % Prof.),	31½/6 32½/6	4 4½	1 0	4/- Aug 14 '95	1 0 0	107,011	"	"
" (10 % Prof.),	3½/6 3½	33½ 3¾	1 0	2/- Aug 14 '93	0 8 0	12,968	"	"
Pahang Kabang T	3½ 3½	3½ 3½	1 0	—	1 0 0	200,000	Malay Pn.	4a, Jeffrey's sq. E.
Straits Developmt.	1½ 1½	1½ 1½	1 0	—	0 18 0	184,398	Pahang ...	15, Cophall Avenue
Terrakonda .....G	1/6 2/6	1/6 2/6	4/	—	0 1 0	157,491	Mysore S	6-7, Queen-street-pi

**THE GLENCAIRN MAIN REEF GOLD MINING COMPANY, LIMITED.**

**CAPITAL** ... ... ... £225,000.

**ANNUAL REPORT ENDING JUNE 30, 1895.**

**BOARD OF DIRECTORS.**

B. I. BARNATO, Chairman. J. TUDHOPE, Esq.  
S. B. JOEL, Deputy-Chairman. C. MARX, Esq.  
E. BRAYSHAW, Managing Director. W. JOEL, Esq.  
G. IMROTH, Esq.

**LONDON AGENTS**—Johannesburg Consolidated Investment Company (Limited), 7, Lethbury, E.C.

**PARIS AGENTS**—London-Paris Financial and Mining Corporation (Limited).

**HEAD OFFICE**—Johannesburg.

Extracts of Report of Directors submitted at a Meeting of Shareholders held in the Board Room, Colonnade Buildings, Johannesburg, on Tuesday, September 24, 1895, at 11.30 a.m.,

**GENTLEMEN.**—Your directors have pleasure in submitting to you their report on the affairs of the company, together with balance-sheet and profit and loss account, duly audited to June 30 last.

**ACCOUNTS.**

From the detailed statements of revenue and expenditure laid upon the table you will find the net profit on the year's operations (including £26,710 12s. 1d. mine development) was £65,069 4s. 10d., an increase of £32,540 3s. 6d. over the previous year.

**INCREASE OF CAPITAL.**

As would be gathered from last accounts, the capital of the company was increased from £200,000 to £225,000 on June 9, 1894, which were issued to shareholders, realising a premium of £10,413 19s. 8d.

**DEPRECIATION.**

Machinery, plant, &c., have been written down by the sum of £19,065 9s. 1d., as per detailed statement.

**BATTERY.**

This was increased by 20 head on January 1 last, and a further 30 head (making in all 100 stamp) will be going about the middle of October.

**CYANIDE.**

New cyanide works have been erected, with all the latest improvements, capable of treating 12,000 tons per month, and will also be started about the middle of October.

**MINE.**

The manager's report deals fully with the work that has been done during the year.

**CAPITAL EXPENDITURE.**

Over £47,000 has been spent in the year in additional rock drill plant, buildings, battery, cyanide plant—all necessitated by increasing the crushing plant from 50 (light) stamps to 100.

**MANAGEMENT.**

Mr. E. Wiltsee resigned in July of last year, and Mr. W. T. Pope (late manager of the Simmer and Jack) was appointed in his place. Your directors are very satisfied with the manner in which Mr. Pope has managed the property, and particularly with the condition to which he has brought the mine and strengthened the ore reserves.

**DIVIDENDS.**

During the year three have been declared, viz., September, 1894, No. 1, 5 per cent.; December, 1894, No. 2, 7½ per cent.; and June, 1895, No. 3, 15 per cent.—in all 27½ per cent.

**AUDITORS.**

It will be your duty at this meeting to elect auditors for the ensuing year, as well as to fix the remuneration for the last.

**DIRECTORS.**

Mr. J. Stroyan resigned his seat on the board, and Mr. J. Tudhope was appointed in his stead; Mr. G. Imroth was also appointed. You are asked to confirm these appointments.

In terms of the Trust Deed, Messrs. B. I. Barnato and J. Tudhope retire by rotation, but are eligible, and have been duly nominated for re-election.

E. BRAYSHAW, } Directors.  
S. B. JOEL, }

Johannesburg, September 14, 1895.

**GLENCAIRN MAIN REEF GOLD MINING COMPANY (LIMITED).**

Mine Office, August, 1895.

The Chairman and Directors, Glencairn Main Reef Gold Mining Company (Limited).

**GENTLEMEN.**—I herewith submit my report on the operations of this company for the year ended June 30, 1895.

**MAIN INCLINE.**—This incline has been continued from between the 4th and 5th levels to below the 6th level, ground cut for ore bin at 5th level, and ore bin fixed, and ground also cut for ore bin at 6th level.

**THIRD LEVEL.**—804 feet of driving has been done on this level east of the shaft on main drive and overlap; the average width of reef has been 3 feet 3 inches, and the average assay value 21 dwt. 12 grains.

**FOURTH LEVEL.**—East drive has been driven 905 feet. The average width of reef has been 3 feet 10 inches, and the average assay value 19 dwt. 2 grains.

West drive on this level has advanced 644 feet. The reef has averaged 3 feet 5 inches, and given an average assay value of 15 dwt.

**FIFTH LEVEL.**—East drive driven 565 feet; the reef has averaged 4 feet 3 inches wide, and assayed an average of 19 dwt. 3 grains.

West drive advanced 352 feet; average width of reef 2 feet 8 inches, and assay value 15 dwt. 3 grains.

**SIXTH LEVEL.**—Driving on this level has been started and advanced west of shaft 16 feet. On the middle reef the reef has averaged 18 inches wide, and assayed 24 dwt. I would point out that this reef has never been worked on the property; in the upper levels it was poor. I am now driving on both reefs at the 6th level.

**ORE RESERVES.**—I estimate the number of tons of ore developed on North Reef and ready for stoping at 70,000 tons. Of this amount there are about 45,000 tons east of the shaft, and 25,000 tons west of the shaft. With the additional development of the middle reef, quantity should be considerably increased during the next few months.

**CYANIDE WORKS.**

During the year 65,540 tons of tailings have been treated, yielding 20,482 ounces of bullion, or an average of 6225 dwt. per ton of tailings; the average working cost per ton over this period has been 5s 6d. shillings. This high rate of working cost is due to the fact of our cyanide plant being so far from the settling pits; the transport is, therefore, very high, and the wear and tear on trucks enormous. With the new plant now about ready to start, the working expenses should be brought down at least 2s. per ton.

**GENERAL.**

During the year we have added four tailings depositing pits with necessary fluming.

Two new 25 feet 6 inches by 7 feet treatment vats erected, also new slime dam built.

In conclusion, I wish to express my entire satisfaction with my staff, who have greatly assisted me in carrying out my duties during the year.—I am, gentlemen, yours faithfully,

W. T. POPE, General Manager.

**GLENCAIRN MAIN REEF GOLD MINING COMPANY (LIMITED).**

BALANCE SHEET AS AT JUNE 30, 1895.

**LIABILITIES.**

To Capital (in £1 Shares, fully paid)	... £225,000 0 0
" Native Pay due at date	... 1,500 0 0
" Sundry creditors	... 12,572 16 9
" Drafts against Gold shipped	... 13,500 0 0
" Bank advances against Gold shipped	... 6,377 2 7
" Balance Profit and Loss	... 56,151 16 0
	£315,101 15 4

**ASSETS.**

	At June 30, 1894.	Additions since.	After deducting depreciation.
By Battery plant (70 stamps)	£33,858 9 2	£9,953 7 10	£37,200 0 0
Mine Buildings	9,114 3 1	3,168 11 9	11,350 0 0
Hauling and Pumping Plant	15,241 0 10	1,644 6 3	15,200 0 0
Mine Plant	4,651 16 11	4,229 6 11	8,000 0 0
Water Service Plant	4,090 0 0	40 17 6	3,000 0 0
Tramway & Plant	3,761 9 3	140 17 0	3,510 0 0
Mine and Office Furniture	327 19 6	103 2 9	320 0 0
Live Stock, Carts, and Harness	444 0 0	293 14 6	530 0 0
Tailings Pump	1,959 9 3	172 14 6	1,100 0 0
Reservoirs & Dams	1,929 6 6	611 4 5	2,040 0 0
Planting and Fencing	109 17 6	152 13 0	—
Electric Plant	3,497 9 9	652 8 5	3,500 0 0
Rock Drill Plant	9,172 7 10	5,002 15 9	12,060 0 0
Cyanide plant	7,950 19 3	2,380 19 8	7,800 0 0
Additional 30 Stamps (in course of erection)	—	8,347 18 3	8,347 18 3
New Cyanide Works (ditto)	—	10,764 17 4	10,764 17 4
	£96,108 8 10	£47,679 15 10	
		£143,788 4 8	
Less, written off for depreciation	19,065 9 1		
		£124,722 15 7	

By	Battery Plant	...	...	...	6,611 17 0
"	Mine Buildings	...	...	...	932 14 10
"	Hauling and Pumping Plant	...	...	...	1,685 7 1
"	Mine Plant	...	...	...	881 3 10
"	Water Service Plant	...	...	...	1,130 17 6
"	Tramway Plant	...	...	...	392 6 3
"	Mine and Office Furniture	...	...	...	111 2 8
"	Live Stock, Carts, and Harness	...	...	...	207 14 6
"	Tailings Pump	...	...	...	1,032 3 9
"	Reservoirs and Dams	...	...	...	500 10 11
"	Planting and Fencing	...	...	...	262 10 6
"	Electric Plant	...	...	...	649 18 2
"	Rock Drill Plant	...	...	...	2,185 3 7
"	Cyanide Works	...	...	...	2,531 18 11
"	Property Account (portion of Mynpacht)	...	...	...	153,000 0 0
"	Gold in Transit (6,504 90 ounces)	...	...	...	22,446 0 0
"	Cash at Mine and London Office	...	...	...	2,414 9 11
"	Stores on hand	...	...	...	9,747 1 11
"	Water Service (paid in advance)	...	...	...	266 13 4
"	Sundry Debtors	...	...	...	2,504 14 7
					£315,101 15 4

E. BRAYSHAW, } Directors.  
S. B. JOEL, }

Johannesburg Consolidated Investment Company, Limited, Secretaries, per D. HENDERSON.

We certify that we have examined and compared the Books and Vouchers of the Glencairn Main Reef Mining Company (Limited), and that the above balance-sheet is a true and correct extract from the said books as at June 30, 1895.

S. EDKINS, } Auditors, Johannesburg, September 14, 1895. J. MOON,

**PROFIT AND LOSS ACCOUNT FOR TWELVE MONTHS ENDED JUNE 30, 1895.**

**EXPENDITURE.**

Cost per ton.	To Mining Expenses	... £38,288 19 6
2,950	" Mine Development	... 26,710 12 1
6,629	" Hauling and Pumping Expenses	... 4,900 9 4
1,216	" Tramway Expenses	... 1,613 2 10
0,400	" Milling Expenses	... 18,077 17 2
3,233	" Miscellaneous Expenses	... 9,758 9 11
2,421	Subscription Chamber of Mines	... 157 10 0
	Gold Theft Subscription	75 0 0
	Native Labour Fees	243 1 2
	Directors' and Audit Fees	604 2 3
	Printing, Stationery and Advertising	467 10 0
	Travelling Expenses	75 3 7
	Medical Expenses	98 3 6
	Petties	312 8 0
	Survey Fees	338 0 5
	Cables	95 8 0
	Fire Insurance	27 0 0
	Interest	202 3 1
	Law Charges	199 16 10
	Bonus	250 0 0
	Consulting Engineers' Fee	1,500 0 0
	Charges on Concentrates	129 5 6
	Rent and Licenses	30 10 0
	Lots on Pump Sold	108 13 4

The Subscription List will open on Monday, the 28th October 1895, and will close at 4 o'clock on the same day for London, and on Tuesday, 29th October, at 4 p.m., for the Country.

## THE UNIVERSAL CORPORATION, LIMITED.

Incorporated under the Companies Acts, 1862 to 1893.

CAPITAL .. . . . .	£2500,000,
DIVIDED INTO	
60,000 Ordinary Shares of £1 each .. . . . .	£60,000

AND  
10,000 Deferred Shares of £1 each .. . . . .

10,000

£500,000

Present issue: 200,000 Ordinary Shares & 5,000 Deferred Shares,

PAYABLE AS FOLLOWS:-

2s. 6d. on Application; 2s. 6d. on Allotment; and the balance in Calls of not exceeding 2s. 6d. as and when required.

Applications from Holders of Shares in this Corporation for Shares in any Companies which it may form will have preference on allotments being made in such Companies.

Shares for 100 Ordinary Shares and upwards will be entitled to apply for shares at Par, at the rate of 1 Deferred Share for every 100 Ordinary Shares applied for. Allotments will be made pro rata.

The Deferred Shares will be entitled to one-half of the surplus profits of the Company of each year remaining after paying or providing for the payment out of such profits of a Dividend for such year at the rate of 15 per cent. per annum upon the amount paid up on the present issue of Ordinary Shares, and on any further issues of Shares at not exceeding the same rate, and provision for a Reserve Fund has been made in accordance with the Articles of Association of the Company.

Share Warrants to Bearer will be issued, when the Shares are fully paid up, to Shareholders requiring them.

Directors.—JOHN McDONALD, 43 Threadneedle Street, E.C.; H. S. STONEHAM, 70 Cornhill, E.C.; W. MACLAREN WALKER, 31 St. Vincent Place, Glasgow; E. ORR, 38 Throgmorton Street, E.C.

Bankers.—THE CYLDESDALE BANK LIMITED, 30 Lombard Street, London, E.C., and Glasgow and Edinburgh; BANK OF AUSTRALASIA, 4 Threadneedle Street, London, and Australia.

Officers.—HENRY D. KIMBER & COMPANY, 79 Lombard Street, E.C.

Builders.—MONKHOUSE, GODDARD & CO., St. Swithin's Lane, London, E.C.

Surveyor (pro tem.).—A. H. BRESTON.

Agents.—43 Threadneedle Street, E.C.

### PROSPECTUS.

This Company has been formed for the purpose of buying and selling gold and other mines and mining rights, or obtaining options thereon, or in connection therewith.

Power has also been taken by the Company's constitution to form and promote, or assist in the formation and promotion of companies having for their object the acquisition or working of gold and other mines or mining properties, or acquiring options thereon; and whilst the Company's operations will not be limited to that particular branch of business, it is proposed to make it the prominent feature.

The knowledge and information which the Directors possess places them in a position for obtaining reliable information from the chief centres of the gold mining industries, which information it is believed will enable them to make this portion of the Company's business a source of much profit.

The Directors are in a position to secure the services immediately of competent mining experts, now in Australia, Africa, and other Gold Mining centres.

The Directors propose in the first instance to direct their attention mainly to operations in South Africa and Australia.

Having regard to recent developments in the mining industry, also to the evident tendency to dispose of properties held or owned by individuals to joint stock companies, and to the many properties only requiring capital to develop them, to turn them into profitable concerns, the field for the Company's operations is practically unlimited.

It often happens that properties of great value or promise remain undeveloped owing to the owners lacking the necessary means to make such development. It will be the business of the Directors to carefully consider any such cases which exist before them, and, if the prospects are sufficiently promising, to provide the money to make the necessary tests with a view to bringing such properties into the public.

The Directors have several such properties of great promise now under offer or consideration, particulars of which, for obvious reasons, the Directors do not deem it desirable to make public.

Applications from Shareholders of this Corporation for Shares in any Companies which it may form will have preference on allotments being made in such Companies.

The vast mineral areas of Australia and Africa, which at present are only partly developed, present in themselves a large field for the operations of this Company.

In addition to the objects above described, the Company propose to undertake general agency and financial business, more particularly in connexion with gold mining enterprises.

The business which the Company proposes to carry on is one of a highly speculative character, as is shown by the present prices of the Shares in the following Companies whose objects are similar to those of this Company—viz.,

Name of Company.	Par Value	Amount paid	Latest Price
For Australian Gold Fields Ltd.	£1	£1	£7
London & Western Australian Explora-			
tion Co. Ltd. . . . .	£1	£1	£6
Colonial & Finance Corporation Ltd. . . . .	£1	10s.	£4
British Australian . . . . .	£1	£1	£5
Western Australian Exploring & Finance			
Co. Ltd. . . . .	£1	£1	£4

The following Contract has been made—viz., a Contract dated the 24th day of October, 1895, and made between John McDonald, on behalf of himself and the other Directors of the Company, of the one part, and T. P. Thorne as Trustee for the Company of the other part, whereby, in consideration of the payment by the said McDonald of all the costs and expenses of and incidental to the forming and working of the company up to the date of allotment, including advertising, but exclusive of brokerage, £5,000 fully-paid Deferred Shares are to be issued to him, and he has the option of subscribing at par for a further 5,000 of such Deferred Shares, and 50,000 of the unissued Ordinary Shares also at par.

All the Directors are founders of the Company.

No promotion money is being or will be paid.

Copies of the Memorandum and Articles of Association of the Company, and of Agreement above-mentioned can be seen at the Offices of the Company's Directors.

A few number of Shares be allotted than that applied for, the excess paid on application will be credited in reduction of the amount payable on allotment. If the total applications for Ordinary Shares should be in excess of those now offered for subscription, allotments will be made pro rata.

If no allotment be made, the deposit will be returned in full.

Prospectuses and forms of application for Shares can be obtained at the Company's Offices, also at the offices of the Company's Solicitors, and from the following:

Ogilvie Bank, Limited, London, Glasgow and Edinburgh.  
Mons. Hornby & Cockleston, Tithbarn Street, Liverpool.  
Mr. Hugh Gray, 59 St. Vincent Street, Glasgow.

Mr. Alexander H. Robertson, 31 St. Andrew Square, Edinburgh.

Mr. F. W. Nish, St. Ann's Square, Manchester.

Mason, Mellor & Wimpey, Cloth Hall Street, Huddersfield.

Applications for Shares should be made on the accompanying form and addressed to either of the Bankers of the Company, together with 2/6 per Ordinary Share, and 2/6 per Deferred Share for which such application for Ordinary Shares entitles the subscriber to apply.

It is intended in due course to apply for a Stock Exchange quotation.

London, 26th October, 1895.

This form of application may be used.

The Universal Corporation Ltd.

### FORM OF APPLICATION.

DEFERRED AND ORDINARY SHARES.

Deferred Shares may only be applied for at the rate of 1 Deferred Share for every 100 Ordinary Shares applied for.

THE UNIVERSAL CORPORATION LIMITED.

Having paid to the Bankers of the Corporation the sum of £....., being £1. per Ordinary Share, and 2s. 6d. per Deferred Share on the underwritten Shares in the above-named Corporation, viz.:-

..... Ordinary Shares of £1 each .. . . . .

..... Deferred Shares of £1 each .. . . . .

..... Ordinary Shares and Deferred Shares .. . . . .

I request you to allot to me that number of such shares respectively, upon the prospectus dated 26th October, 1895, and the Memorandum and Articles of Association of the Corporation, to the terms of which latter I hereby assent; and I agree to accept and pay for the same, or any smaller number that may be allotted to me, and I request you to place my name on the Register of Holders for the Shares so allotted.

Name (in full) .. . . . .

Address (in full) .. . . . .

Profession or Occupation .. . . . .

Date .. . . . . 1895

Usual Signature .. . . . .

## REPORTS FROM THE MINES.

### B R I T I S H M I N E S.

POLBERRY.—October 17: The air compressor has been fixed on its loading, and a new house erected over it. The steam pipes have been fixed from compressor to the boiler, and the necessary fitting provided for the boiler, which, as stated in a recent report, has been removed from Turn-a-Voor shaft to Trevaunance engine shaft, and put into first class condition. We were delayed somewhat in our preparations for starting the rock drill by the failure of the makers to deliver the air pipes according to promise. The air pipes have, however, been completed this week, and we have to-day commenced to drive north of shaft at the 55 fathom level. The new crosscut will be driven underneath the 26 crosscut, about 11 fathoms deeper vertically, or 30 fathoms deeper on the line of the shaft. Seeing the extent of the productive tin ground laid open in the 26 crosscut, the prospects of the new crosscut are extremely good, and we think it safe to predict that the same channel of productive ground will very shortly be proved to exist at the deeper level. We expect to drive about 8 fathoms a month.—(Signed) Charles Thomas, John Harper.

WHEAL FRIENDLY.—St. Agnes, Cornwall, October 21:—I beg to inform you that I set the men to sink the engine shaft one fathom £16. In sinking the shaft we discovered a part of the Pink lode standing in the foot. The lode at this point is very large. We have 20 tons of tin stone on the floor, which produces 24 lbs. of tin ore to the ton of stuff. We shall begin to stamp the stuff this week.—(Signed) Charles Cole.

### COLONIAL, INDIAN, AND FOREIGN MINES.

BREMNAES.—The following report has been received from the manager, Mr. John Daw, junr., dated Haugesund, October 16: Referring to our communications of the 10th and 14th inst., we have to advise that, apart from a slight increase in width of the quartz in the 200 feet level north, there is little or no alteration to note elsewhere, either in the width or value of the lode. We are expecting miners this week to restart the sinking of the shaft commenced by the Norwegian Company, about 300 feet south of the main shaft on section 4. This shaft we shall connect with the 200 feet level, and as we intend to drive an intermediate level at the same time, we shall, when the connection is made, have a large piece of ground open for stoping. In a day or two we shall also commence to drive the 80 feet level north, as judging from where the lode is opened on in the 200 south, we have only 15 metres to drive to get through the dyke and disturbance. I think we have a very fair prospect of opening on some rich ground in that direction.—Section 5, upper workings. The different points under development are opening on some very good quartz, and judging from the test crushings—viz., 8 tons for 3½ ounces, and 50 tons for 21 ounces, I think its mill value can be fairly estimated at 8 to 9 dwt.s. In the lower workings we are sinking the air shaft as fast as possible. We are in a strong lode carrying a good deal of mineral. The men at surface uncovering the outcrop are exposing the finest lode I have seen in this field at surface. We are almost inclined to think we are at the junction of two lodes. During the summer an old prospector and his wife have panned 3 ounces of gold from the decomposed matter, and this week we have broken some of the finest and richest gold stones I have seen raised in this field. In fact, some of the stones contain 50 per cent. gold. We hope in a week or two to give you some encouraging results from these workings. The following report has been received from the manager, Mr. John Daw, junr., dated Haugesund, October 21:—We confirm our letter of 16th and telegram of 19th inst. Section 4. The only alteration to call your attention to is an improvement in the winze in the 400 north. The lode was disturbed, and the quartz squeezed out. An alteration in the dip of the lode is taking place, and the quartz is coming in again on the foot wall. All the points are as last reported; in fact, the developments generally are most encouraging. Section 5. The different points worked are producing gold-bearing quartz, some of which is dotted through with visible gold. In the lower workings the men are making rapid progress with the air shaft, and this morning several stones, rich in specks of visible gold were picked out of the broken material. As to the surface outcrop there is little trade. In our last letter and telegram referring to the breaking of some quartz, rich in visible gold. We have begun on a surface cutting a few yards south of shaft, and hope soon to have the pleasure of giving some important results.

ELKHORN.—Copy of Mr. C. A. Molson's monthly report for September: Mine, ore breaking department, 550 feet level south. The vein is 3 feet wide, and the value 41 ounces.—650 feet level south, porphyry stop. The vein is 2 feet wide and the value 25 ounces. The back of the stop has held into the old workings.—750 feet level south. The vein is 18 inches wide, and the value 34 ounces.—850 feet level north. The vein is 4 feet 6 inches wide and the value 20 ounces.—950 feet level north. The vein is 6 feet wide and the value 38 ounces. South of the shaft. The vein is 30 inches wide, and the value 30 ounces.—1050 feet level north. The vein is 3 feet wide and the value 28 ounces.—1150 feet level, north. The vein is 2 feet wide, and the value 49 ounces. This stop produces a small amount of smelting ore.—1250 feet level north. Underhand stop. The vein is 4 feet wide, and the value 35 ounces. South of the shaft, south end. The vein is 2 feet wide and the value 22 ounces.—1350 feet level south, raise stop. The vein is 12 feet wide, and the value 40 ounces. Main stop, centre. The vein is 22 feet wide, and the value 37 ounces. This stop is yielding some fair grade shipping ore. No work has been done at the south end pending the retiming of the 1250 feet stop.—1450 feet level south. The vein is 5 feet wide, and the value 44 ounces. Some bunches of high-grade smelting ore occur in the footwall portion of the vein.—1750 feet level south. The vein is 2 feet wide and the value 36 ounces.—1750 feet level south. Intermediate. The vein is 18 inches wide and the value 40 ounce.—South drift stop. The vein is 2 feet wide, and the average value 24 ounces. South winze, 70 feet stop. The vein is 2 feet wide and the value 25 ounces. North of the shaft. The vein is 3 feet wide, and the value 60 ounces. The ore is of banchy character.—Prospecting department, 1250 feet level north. Raise to underhand stop advanced 28 feet, total length 66 feet. No ore of value has been found here yet.—South of the shaft. Hanging-wall crosscut extended 47 feet 7 inches, total length 122 feet. The face of the crosscut is now in a siliceous limestone of similar character to that found on the surface. No ore was found here, and it is doubtful whether it will be worth doing any more work in this direction, as we seem to have left the ore-bearing zone.—Main stop. A crosscut was put into the hanging-wall for 12 feet in length. The hard wall was reached at this point, the ground passed through contained some low grade ore which would not pay to work.—Amount and source of ore hoisted. Level 550 feet 21 cars, 650 feet 98 cars, 750 feet 20 cars, 850 feet 47 cars, 950 feet 148 cars, 1050 feet 84 cars, 1150 feet 15 cars, 1250 feet 132 cars, 1350 feet 693 cars, 1450 feet 200 cars, 1550 feet 90 cars, 1650 feet 14 cars, 1750 feet 380 cars.—total 1942 cars. No. of tons 1126.—Milling department. The mill made a steady run during the month. The usual repairs were made as required.—Table of work performed. Ore on hand September 1 139 tons, raised from the mine 1126 tons, less smelting ore 21 tons, waste 143 tons, 164 tons, 961 tons, add for salt 167 tons, dry ore panned 1128 tons, pulp in the mill 63 tons, rough ore in stock 76 tons, total 1267 tons—1267 tons. Table of mill work. Dry ore panned 1128 tons, average assay value 36 ounces, average percentage salt used 14 per cent., average value of tailings 3 ounces, average percentage saved 92 per cent., No. of Doré bars produced 37 bars, No. of ounces fine silver 38,286 ounces, No. of ounces pure gold 30 ounces, batteries in service 27 days 8 hours, pans in service 29 days, estimated value of bullion shipped

\$24,865, excess on August shipments \$196, actual returns from ore shipped \$1163, current expenses, including salaries, labour, supplies, &c., \$19,461, balance, being profit for September (or \$4.85 to £ sterling equals £1304), \$6763.—Shipping ore. The shipments amounted to 21,347 tons, and netted \$1163.5, the average value being \$54.51 per ton.—Surface department.—Fuel. The deliveries have continued in a regular manner. The quality of the wood is improving and the consumption is less in consequence. The weather is fine again, the equinoctial storms being over. Everything about the works is in good order.

LOMA.—The mine superintendent writes under date September 9 as follows: Hydraulicing was continued in the Soto Mine up to August 28, but owing to the very dry season the water supply has diminished very much, and had we not had the new reservoir to store the water in, hydraulicing would have been suspended entirely. We cleaned up on August 29, after a run of 900 hours, \$1906.425 gold, giving a profit of \$1000 on the run. A great deal of top soil and clay had to be washed away to make an opening in the mine, and we were unable to clean down the ground cuts, as a large slide of bed rock fell in just as we were commencing the clean up. Under the circumstances, I consider the return satisfactory. The opening looks very well, and gives promise of good returns. The reservoirs, ditches, and siphons, are all in good order, and giving no trouble. I hope the general meeting will be put off as long as possible, so that we may have time to get a good run from the Soto Mine with a full water supply.

TOLIMA.—The directors have received advices by the mail of October 24 from their mines, of which the following is an abstract:—Frias estimated August returns (120 tons) silver, valued at 2s. 9d. per ounce, £4145 18s.; valued at 2s. 9d. cost, £3457 17s. 8d.; valued at 2s. 9d. profit, £688 0s. 4d. The underground agent reports 87 fathoms 3 feet 8 inches of ground expanded, of which 56 fathoms 2 feet 4 inches were productive, leaving 31 fathoms 1 foot 1 inch of unproductive ground. The superintendent, writing under date of September 18, explains that the reduction in the estimated profit on the working of the mine for the preceding month, cabled on September 2, is due partly to a reduction in the grade of the mineral raised, and partly to the cost exceeding somewhat the estimates. He, however, at the same time, expresses a hope that the month of September will afford better returns, meanwhile stating that the improvement already reported in the 130 west end had been maintained, the lode, at the date of writing, yielding 10 cwt. of high grade ore to the fathom, affording, at the same time, fair prospects of further improvement. The 110 fathom east and west levels on the north branch are reported by the superintendent as constant in their yield, the west end having shown a further improvement at the date of writing. A winze is being sunk in this 110 fathom level north branch, which is reported as yielding pay ore estimated at 10 cwt. the fathom. The superintendent also refers to the benefit that had accrued to the works from the increased water-power supplied by the Pomponia ditch extension during an unusual prolongation of the dry season.—Underground report. Engine shaft was sunk 12' feet, by 10 men and a boring machine, at 3200 per fathom, thus being 55 feet as total depth below the sole of the 140 fathom level. The part of the lode sunk upon has given some rich portions of high-grade mineral, but the present bottom remains rather poor.—150 fathom 3 feet 8 inches of ground expanded, of which 56 fathoms 2

**BRITISH BROKEN HILL PROPRIETARY.**—Mining manager's report for the week ending September 11:—Blackwood (No. 1) shaft, 300 level. West crosscut off plat lengthened 6 feet, making total length from plat 29 feet, face unchanged.—200 level. Northeast drive off winze down No. 1 west crosscut advanced 13 feet, total distance 56 feet, face looking rather mullocky in bottom, but shows good sulphide ore in roof. We saved in driving 7 tons sulphides, averaging 21 per cent. lead, 12½ ounces silver per ton, and 14 per cent. zinc. West crosscut down western extension winze extended 6 feet, total length 66 feet, showing splendid face of good grade sulphide ore. We mined from this crosscut 16 tons sulphides, averaging 28 per cent. lead, 20 ounces silver per ton, and 26 per cent. zinc. Winze in long crosscut sunk 6 feet, total depth 47 feet, bottom in intrusive country. We obtained 3 tons sulphides in sinking, averaging 25 per cent. lead, 17 ounces silver per ton, and 29 per cent. zinc.—Howell (No. 2) shaft, 300 level. West crosscut from plat lengthened 3 feet, total length 119 feet, very hard sandstone and garnets showing in face. North-east drive off east crosscut driven 8 feet, total length 12 feet; face in hard rock.—March (No. 6) shaft, 2nd level. We mined from the stopes 52 tons carbonate ore, averaging 27 per cent. lead, and 47 ounces silver per ton, and 7 tons 22 per cent. lead, and 21 ounces silver per ton.—Junction 300 level. Uprise risen 7 feet, making total height 64 feet; roof entering harder country.—Surface, air compressor. The masonry for the engine foundation will be completed in course of a day or two, by which time some of the machinery is expected to arrive. We have started laying the pipes to convey the air down the mine.—Week's assays. Lead varying from 10·5 to 39·5 per cent, and 15·5 to 16·2 ounces silver per ton. Sulphides, lead from 11 to 34 per cent, zinc from 9 to 30·7 per cent, and silver 6·5 to 22 ounces per ton.

**CHAFFERS.**—Mr. F. Bowes Scott reports under date September 17:—It has been a question with me whether at once to put down a shaft close to the boundary line between Chaffers and Great Boulder South Extended, in order to test the question of the presence or not in our ground of the Great Boulder south lode, the lode from which all the Boulders rich ore is derived. I am inclined to do so as our neighbours to the eastward are sinking within 50 feet of the boundary, and, should the reef be found on their lease we shall be saved the cost of a fruitless search. A moot point at present is the dip of the Boulder lode, whether to the westward or eastward, which may be an essential feature to us. It is very problematic upon which side of the boundary it will be found. You will note from the fortnightly report that No. 2 shaft is apparently bearing out the opinion I expressed to my directors on the Golden Link respecting the Chaffers lode. If the lode continues to maintain its value the next few feet, I shall cable you the news. I am hopeful that when water is obtained in the Horse Shoe shaft we shall be able to supply some stone to the battery.

**FRONTINO AND BOLIVIA.**—La Salada, September 7:—Silencio. If there are no interruptions, and the ground does not change to disadvantage, the sinking for the month should be good, to judge from the amount sunk already, since August 20. The lode in No. 7 level north has become divided into two branches by a soft granite somewhat mineralised, at least it contains pyrites, but the lode throughout is rich; on the south in this level the lode is slightly changed, and is a little poorer, but probably will be equal to its former quality when the crossing has been passed through. The No. 6 level north has been temporarily suspended, whilst the dry season lasts; south there is no perceptible change. No. 5 level north the work has been resumed, but the direction changed a little to the east, there being a small branch which indicates that there may be something in the direction now taken. No. 4 south the lode is poor with walls quite in contrariety one to the other, footwall being extremely hard, and the hanging the opposite. No. 3 south, lode improved in quality, and the whole forms a mineral 4 feet thick. The Bolivia crosscuts now favourably progressing, having passed through the soft part of the crosscourse in it, and the advance is now in a moderately hard granite. The south drivage in the adit level is precisely the same as I have lately reported. All the stopes throughout the mine are producing about the same quality ore as in the past few months. The pumping gear works well, but the scarcity of water makes it difficult to keep the mine dry continuously. The hoisting shaft has been completely repaired, new ladders placed, and all necessary fixtures for the safety of the hoisting. Other work in the mine has been attended to as circumstances required.—La Salada. The lode in the shaft has not yet been intersected, although 43 feet are sunk below the No. 2 crosscut, where the lode should be found, judging from its dip above, and I think it is now thoroughly proved that a much more perpendicular underlie exists between the two points mentioned. It may be that a crosscut No. 3 had better be driven at a point (say) 50 feet, or about 7 feet deeper, and levels started, as it would not be prudent to have "backs" too high in such a flat lode. The north drivage is a little mixed, but south the lode is 4 feet wide and in rich ore. Above this point lode is 5 feet wide, also rich. The Manto is now completely cut through in No. 2 crosscut and appears rich; indeed, from the small amount milled this is correct. Points above this level (north and south from No. 2 crosscut) all showing extremely well, and the yields are good. In another month it may be hoped that there will be better prospects, as rains are expected, and the Tias water should be at La Salada, but at present nothing more can be expected under existing circumstances, every effort is being made to keep the water from rising further and pumps are placed to work with hand labour to effect every possible benefit. Cordoba. Such insignificant change has taken place in the past fortnight, that it is scarcely worth noting. The south level in No. 8 crosscut is much the same, although there are apparent signs of an early improvement, but the north level is quite the same. There is a slight improvement in No. 7 level north, and the Rosario section carries a fair milling ore in a lode about 2½ feet thick. Other points as afore-mentioned are quite the same as reported in my last letter.—Tigrito. The lode in the No. 6 level west although it maintains its size, has changed in quality, as the daily yields show, and in the rise mentioned in a previous report a crossing has appeared which has pinched the lode slightly. Passing this, the rise, it may again open up and improve, but it is doubtful if the drivage is sufficiently advanced westward to reach the good ore below No. 5 level. Marmajito. The turn in the west level still continues in the same direction, but the ore is of fair quality. East the ore is poor in the "end," but stopes above are good. Altogether the mine maintains its former qualities, and the yields from the mill much the same.—The Season. The dry season still continues, and has been the longest known here for many years, it is said to be almost unprecedented. In the usual course of events, the wet season should set in about the middle of last month, but with the exception of an occasional shower there has been dry weather continuously. This, of course, has had the effect of diminishing the waters of the ditches to such an extent that only about half the number of heads in the native mills are at work, and those very slowly. The crushings, therefore, are very light, and at the time of writing it is even worse. The outlook for the present month is anything but encouraging and the arrival of the Tias water is awaited with great anxiety. This should be at La Salada about the end of the month, when everything on this side will be in full swing. The wheel at the Marmajito mill had become so disabled with age that further repairs were impossible. It, therefore, became necessary to build a new one, and this work is so far advanced that it should be completed within a fortnight. Not only has the scarcity of water interfered with the milling but with the pumping, and shaft sinking has been much retarded, especially at La Salada.—Tias water. I have nothing to remark under this head, except that it is hoped the tunnel will be completed about the 20th inst., and the repairs to the dam go on rapidly.—Geo. W. Eustice.

**HANNAN'S BROWNHILL.**—Extracts from letter from Mr. Varden, dated September 14: New developments on the No. 2 level, the width of the reef is 16 feet, has been proved by two crosscuts at intervals of 100 feet. I estimate the value of the ore at 3 ounces per ton. Yesterday I assayed a sample from each crosscut with the following result: 49 ounces 7 dwts. 20 grains, and 2 ounces 1 dwt. 19 grains respectively. The high result of the former is no doubt due to the presence of visible gold which is absent in the latter.

The true width of the reef is really nearer 20 feet than 16, for in addition to the length of the crosscut there is the width of the level 4 feet, which is all in ore. I am now crosscutting from the end of No. 2 North, and expect to cut the same body again, also when we have driven 150 feet from the last crosscut in No. 2 south, I will prove it again. I fully expect the contemplated crosscuts will prove the continuance of a large body. No. 2 south is still in good ore. A sample taken from the end on Thursday assayed 2 ounces 3 dwts, and to-day fine specimens of coarse gold were taken out and bagged. Mill. The erection of the mill is still progressing. Monday we will begin erecting the building.—Crosscut No. 3. I omitted to mention that a crosscut west on No. 3, 188 feet from surface, has just been started to cut the lode below water level.

**MYSORE REEFS (Kangundy).**—Fortnightly report of Captain M. Scantlebury, mine agent, dated October 2: Underlie shaft. This shaft has been sunk 8 feet 6 inches, now 12 feet below the 425 feet level. The quartz is 2 feet wide, assaying 6 dwts. of gold to the ton. 425 feet level north has been extended 14 feet, now 44 feet from shaft. The quartz in the present end is 1 foot 6 inches wide, assaying 1 ounce 6 dwts. of gold to the ton. The quartz in the bottom of level where we are cutting the plat is 1 foot 9 inches wide, and worth 12 dwts. of gold to the ton. The quartz in the back of level near shaft is 1 foot 6 inches wide, assaying 8 dwts. of gold to the ton. Winze below 325 feet level has been sunk 4 feet 6 inches, now 68 feet 6 inches below the level. The lode is improved; the quartz is 1 foot wide, assaying 1 ounce 8 dwts. of gold to the ton. Stopes south of winze. The quartz is 1 foot wide, assaying 1 ounce of gold per ton.—Stopes north of winze. The quartz is 9 inches wide, assaying 15 dwts. of gold to the ton. 325 feet level north has been extended 20 feet, now 270 feet from shaft. The quartz is 1 foot wide, and worth 5 dwts. 12 grains of gold to the ton.—Stopes in back 325 feet level. The quartz is 10 inches wide, assaying 8 dwts. of gold to the ton.—Stopes in bottom 325 feet level. The quartz is 1 foot wide, assaying 8 dwts. of gold to the ton. Vertical shaft has been sunk by hand labour 5 feet 9 inches, now 270 feet from surface. The rock here is very hard, but we are hoping it will change for the better soon as we are getting near the lode. Winze below the 260 feet level has been sunk 6 feet 6 inches, now 57 feet below the level. The lode is 3 feet 6 inches wide, composed of quartz and arsenical pyrite, assaying 3 dwts. 6 grains of gold to the ton.—Stopes in back 260 feet level. The quartz is 1 foot 6 inches wide, assaying 6 dwts. 12 grains of gold to the ton.—Prospecting western reef. The trial shaft south has been deepened 6 feet, now 16 feet from surface. The quartz is 1 foot wide, assaying 4 dwts. of gold to the ton. The trial shaft north has been sunk 13 feet, now 21 feet from surface. The lode is 4 feet wide, 3 feet of which is dark blue quartz assaying 6 dwts. of gold to the ton. A very promising lode.—Health. I am pleased to say the health of the camp is good.

**MOUNT LYELL.**—Copy of mine manager's report for week ending September 4: Surface prospecting shaft, hanging-wall. This shaft has been sunk 5 feet, total 112 feet. There is no change to note.—South drive, No. 3 tunnel. The face has been advanced 6 feet, total 444 feet; driving in fair grade pyrites.—North drive indicator winze. The drive has been advanced 5 feet, total 83 feet. The rock is much harder than it has been.—North drive, No. 4 tunnel. The contractors have driven 2 feet 6 inches, total 197 feet. Still in schist country.—South drive, No. 4 tunnel. Ten feet has been driven, total 257 feet. Country ironstone and schist.—South drive, 75 feet level, engine shaft, No. 4 tunnel. The drive has been advanced 6 feet, total 36 feet. The country driven through has been much tighter for shooting than it was.—No. 5 tunnel. The face has been driven 8 feet 6 inches, total 1086 feet.—Progress report for week ending September 6: Hauling line. All work completed; painting in engine room in progress.—Smelter site. Flues, retaining walls, and superstructure of building in progress. Foundations of stack and hot-blast stoves in progress. Winding engine and incline tramway at work.—Converter site. Excavation delayed by bad weather.—Brick plant. New machine running and all plant working smoothly. Sawmill plant being shifted and erected at new site. Limekiln running full time. Weather very wet and stormy.

**MYSORE WEST GOLD AND MYSORE-WYNAAD CONSOLIDATED.**—Tank block. The mining manager, Mr. P. Bosworth-Smith, reports by mail for the month of September as follows:—South shaft. Sinking was resumed on the 1st inst. The shaft is now down 488 feet 9 inches, making a progress for the month of 17 feet. During the latter part of the month we were delayed by an accident to the pumps, but everything is working well now. The detached mass of quartz mentioned in the last half monthly report has gone out of shaft, but there is still a soft paring giving an influx of water. We shall have to await developments below the 450 feet level before we find out what this quartz is. 450 feet level north has been driven to 387 feet, making a progress of 49 feet for the month. The quartz at the end is 18 inches wide and worth 11 dwts. per ton. 450 north No. 2 rise holed into 400 at 57 feet 3 inches, progress 20 feet 6 inches. In entering the upper level the lode formation carries no quartz, but a few feet down the quartz is 1 foot wide, and worth 4 dwts. per ton. A stope was started here, but the quartz not improving we are putting the men to stope up in the back of the 450 north of this rise. Intermediate level north driven to 138 feet 9 inches from rise, making a progress of 34 feet 9 inches. The ground in the end is still disturbed, there being but 9 inches of quartz worth 6 dwts. per ton.—Intermediate north winze. This holed through into hopper at shaft at 8 feet 6 inches perpendicular depth, which represents about 45 feet measured from the lode below to the 450. Some good-looking quartz has gone away from the winze into the hanging, and as soon as the shoot has been put in we shall stope into the bottom of the intermediate and then into the hopper. Intermediate stope south carries 6 feet of quartz worth 1 ounce 1 dwt. per ton and is improving to the south. Intermediate stope north carries 4 feet of quartz worth 17 dwts. per ton.

**NAMAQUA COPPER.**—Abstract of superintendent's report for August:—Tweefontein Mine. 125 fathom level east. When the winze sunk in the bottom of the 115 fathom level has been holed, no time will be lost in proving the value of the lode at this depth.—105 fathom level west. The ore here is of good quality, and is less mixed with iron than formerly. The lode may at any time improve and yield a larger quantity of copper ore. Worth 3 tons of ore per fathom.—95 fathom level west. At this place the lode is disordered, and is just now of no value.—95 fathom level east. No. 35 winze. This winze has opened up a valuable section of ground. Worth 5 tons of ore per fathom.—95 fathom level west of the above winze. This level shows that there is a great breadth of ground at this point. Worth 10 tons of ore per fathom.—85 fathom level west. There is no change in the appearance of the lode at this level.—Stopes.—No. 1, bottom of 95 fathom level west. No. 2, back of 95 fathom level west. No. 3, bottom of 105 fathom level west. No. 4, bottom of 105 fathom level west. All the stopes, with the exception of the last, continue to yield their usual quantities of ore. Worth 9, 10, 10 and 4 tons of ore respectively.—No. 2 shaft. About 7 feet of ground have been sunk to make room for skip-pit, &c.—25 fathom level west. Very little has been done in driving in consequence of the difficulty of getting away the stuff. There is no change in value. Worth 8 tons of ore per fathom.—25 fathom level crosscut from north to south stope. There is evidently a large body of ore about this place. Worth 10 tons of ore per fathom.—Stopes. South, north. Both these stopes continue to yield satisfactorily and are worth respectively 7 and 9 tons of ore per fathom.—No. 4 shaft. Intermediate levels east and west. These drivings have somewhat improved during this month, and this part of the mine is altogether opening up satisfactorily. Worth 8 and 9 tons of ore respectively.—Shipping. The *Swansea Castle* left Port Nolloth for Swansea on September 23, with about 850 tons of ore.—Output for September. 550 tons of ore of 26 per cent.

**NINE REEFS.**—Superintendent's report for fortnight ending October 2: Vyvyan's shaft: The stopes in the bottom of the 220 feet level south yield quartz of a width of about 6 inches, and assay 2 ounces 3 dwts. 4 grains per ton. The quartz in the bottom of the 220 feet level north now varies from 3 to 6 inches wide, and assays 2 ounces 7 dwts. The quartz in the back of the 220 feet level south varies from 8 to 10 inches wide, and assays on an average 1 ounce 19 dwts. 5 grains. The stopes in the bottom of the 145 feet level

north yield quartz from 9 inches to 12 inches wide, and assay 2 ounces 1 dwt. 2 grains. The quartz in the stopes in the bottom and back of the 145 feet level south varies from 9 inches to 1 foot wide, and assay on an average 2 ounces 15 dwts. 17 grains.—South shaft. This shaft has been sunk 13 feet, or 90 feet below the 210 feet level. The lode which is from 2½ to 3 feet wide is of a very kindly appearance, and assays 6 dwts. 9 grains. We purpose sinking a little deeper for a fork, shall then put the men to strip the hanging ground for the top plat, as well as commence driving the new or 300 feet levels north and south.—Surface: The men are making satisfactory progress with the building in of the new boilers, as well as with the necessary repairs to the walls, &c., of the boiler houses. We are also engaged completing the masonry of the new dynamite magazine, compressor and pumping engine houses, as well as constructing a new carpenter's shop, the whole of which we hope to soon get completed.

**MOSMAN.**—Mine manager's report for the fortnight ending August 31: North Australian. The stopes over the Byerley level continue to yield stone in limited quantity.—Peabody. Underlie shaft. Have cut down a further 30 feet, total from surface 303 feet. Water is making in No. 2 level north.—Wyndham. Underlie shaft. Have sunk a further 12 feet. Total below 14 level 74 feet. The slide makes the ground treacherous, and close timbering is necessary, and progress slow. 13 level north driven 20 feet, total from shaft 448 feet. Reef 4 feet, but poor; an improvement, however, appears coming in, and some mineral is showing. 8 level south reef about 10 inches thick, but bumpy. Some of it appears to show fairly good mineral.

**NORTH WALES MINING PROPRIETARY.**—The following information has been received from the secretary of the Clogau Gold Mine, Barmouth, North Wales:—I beg to inform you that we have cut into fresh gold at the west end of the drive at the bottom of shaft below the Windmill rise (i.e., winze) below main adit level nearly 500 feet from surface). It is a small stringer between the branca and main lodes about 6 inches wide. The gold is in sight for 2 feet, right in the breast of the drive.—(Signed) G. E. Owen, secretary.

**RAND ROODEPOORT.**—The following circular has been sent to the shareholders: The directors are gratified in being able to inform the shareholders that in a report made by the well-known mining and consulting engineer, Mr. William E. Dawson, the assayer to the Transvaal Government and Chamber of Mines, M.E., F.I.C., F.C.S., M.M.S., M.S.C.I., M.S.P.A., London, &c., stating in effect that the Rothschild's claims lie in the line of the Botha's reef on the farm Roodepoort, between Witpoortje and Vogelstruisfontein farms, on a formation consisting of Devonian sandstones, the reef being conglomerate or banket. Some little distance to the west the reef has been opened up and enough work has been done to prove its existence, as a body of ore varying from 3 to 4 feet in width, from which samples taken by him assayed up to 1 ounce 15 dwts. to the ton. The formation of this locality (Roodepoort) is frequently faulty, although the strike of reefs on this portion of the Rand is east and west, yet it is often most difficult to determine the true relation of the different series. Quoting Mr. Dawson's own words in his report:—"There can, however, be little doubt that Botha's reef is the main reef, as they are so similar in their characteristics. As soon as this identity is established, and the reef struck upon your property it will have a great market value, I am convinced that Botha's reef will be found on Rothschild's block. The general average of the workings from this series is good, and is borne out by seven assays I have made. An output of 8 dwts. to the ton should pay well. The position of the property and the facilities offered for carriage of coal to the railway will undoubtedly reduce the cost of mining and milling to the lowest possible basis." Mr. Dawson concludes his report as follows: "There is a great demand for claims round about your property, and they are increasing in value every day. In my belief Rothschild's block of claims are of real intrinsic value." Our local managing director at Johannesburg reports that in compliance with the board's request that a second expert should report upon the property, he engaged Mr. Flemming, the late manager of the celebrated Wemmer Company to go and thoroughly inspect the property. His full report will follow by mail, but in the meantime our local managing director states that Mr. Flemming has informed him that the other two of the three reefs traced upon the company's property were in his opinion the Da Preez and the Randfontein reef. The directors think it right to point out to the shareholders that a confirmation of this opinion will enormously enhance the value of the company's property, and on this point the local managing director states:—"As the thickness and richness of these newly-discovered reefs become known the price will rapidly advance, and may ultimately reach the not uncommon figure of £20,000 per claim." Our property consists of a compact block of 35 c.s.m.s., and the opening up of the reefs has commenced, all the necessary appliances having been sent to the property, and a diamond drill has been arranged for to fully test the reefs at depth. The directors have every reason to be satisfied with the company's property and prospects, and will at once communicate to the shareholders all information and reports as soon as received.

**SILVER KING.**—Extract of letter received from a resident director in San Francisco:—A minimum amount of dead work only has been done during the year, and so far the result has been very gratifying, as it tends to confirm the theories that very valuable ore bodies are to be found below the present workings. The deepest workings on the Bismarck group show clearly that that property is underlaid by rich bodies of ore. The result of the deepest workings, though irregular in the ore averages, shows on the whole a general increase in value and confirms the opinion that a deeper exploitation of this part of the ground would open large resources of high grade ore. On the Oriental group the deepest workings undertaken are in the winzes sunk from the level of the Wall Street tunnel. This winze was commenced early in the year (April 5) sunk on the underlay of the vein. By June 8 last the winze had reached a depth of 55 feet. It had passed through a little, and showed indications at that depth, which led us to start a crosscut into the hanging-wall, where ore was encountered, through which the crosscut was steadily extended, and for the next 34 feet was cutting an ore body assaying up to 20 ounces per ton. When opened up this ore body will probably enable us to raise the grade of the ore crushed fully 50 per cent., and we might at once enter on an era of dividends of £2000 or more per quarter. Taken altogether, the situation at the mine is at present very encouraging. The mill, thoroughly renovated, is now working with the utmost regularity, and will no doubt run without giving any trouble for a long time to come. We are well prepared to handle this rich ore body as soon as it can be prepared for extraction.

**WESTRALIAN PREMIER.**—The following report has been received from Professor Nicholas:—At crosscut, from west of incline shaft, on the new south shaft, the quartz shows fair gold. I have also started another shaft, No. 6, between No. 4, the old underlie shaft, and the new, No. 5. The reef was cut before I left, and the quartz looked like that in our gold shoots, but we did not see any gold in it. The reef was 3 feet in thickness, and I think it must be the same shoot of quartz as that in the No. 5. The quartz in south drive looks the right sort for gold. In No. 8 shaft, 62 feet level north, the reef was making a bulge, and coming round to the east. Here, too, the quartz is very kindly-looking for gold, and in this case we are undoubtedly in the gold shoot of quartz, and fine gold can be got by dollying the quartz and panning it off. As you have been informed, the reef in the crosscut at this level is 26 feet wide. I intend, therefore, to cross cut it in the north level, on the chance that we may find better gold on the inside of the reef. All the gold I have yet seen on this mine is free gold. The pyrites is not present in more than a perceptible degree.

**BROKEN HILL PROPRIETARY.**—The manager reports that for the week ending the 18th inst. 5789 tons of ore were treated, yielding 504 tons of lead containing 140,948 ounces of silver, also 1121 tons treated by amalgamating and leaching plants producing 9692 ounces silver. The price of the shares in Melbourne is £3 2d. buyers.

**ALMADA AND TIRITO.**—Report for the month ending September 28:—Dios Padre. The 250 feet level driving north was extended 12 feet by three men. The lode is small and poor.—Gadalupe. During the first week of the month we cut the lode in the crosscut (150 feet) west of No. 1 shaft, and have since driven north and south on the lode 52' 4 feet. Excepting the last 6 feet of the driveage north, which is producing at present very little ore, the average yield has been about 100 ounces of silver per fathom. The south driveage at present will yield about 1½ ton of green ore, containing 45 ounces silver per ton. The 150 level driving north of No. 2 shaft was extended 17-5 feet, the last 11 feet of which yielded 4 tons of ore, value \$105. We have also separated a large amount of ore, assaying 7 ounces per ton. The 150 level driving south of No. 2 shaft was driven 14' 4 feet. The lode is wide, and yields large quantities of low-grade black ore. The lode in the tunnel driving south of Ibarra's cutting is wide, composed chiefly of quartz. 24 feet were driven during the month.—Stopes. The stope north of the main shaft are fairly productive at present.

**AUSTRALIAN BROKEN HILL CONSOLS.**—The mining manager reports by mail for the fortnight ended September 12 as follows: Block 96, 280 level east, prospecting drive, No. 4 rise. East stopes driven 17 feet. Stopes of No. 2 rise east drive driven 16 feet. Stopped towards No. 2 rise, lode consisting of iron and quartz. On account of find reported last fortnight, stopping towards old stopes has been carried on, but without any more find. Rise near shaft driven 10 feet, total 71 feet. Lode still looking promising; galena has been met with. 280 level west driven 18 feet, total 313 feet; no change. Incline sunk 5 feet, total 586 feet 6 inches. The lode formation consists of carbonate of iron, calcite, and decomposed dolomite, showing mudcav and traces of fahlerz. Stopes of No. 2 west driven 4 feet. A stope is being opened to prospect this level southwards on a strong vein of iron; galena has been met with. No. 5 level east, No. 1 rise driven 1 foot, total 33 feet 6 inches. The lode here dipping fast to the east, it was decided to resume work in the level, which is being done by contract. The lode here is widened 13 feet. Having finished business on No. 5 level, the miners

BALAGHAT-MYSORE.—Joseph Pryor, October 2: Ozle's shaft, 200 feet deep, has been driven 21 feet 3 inches or 208 feet. The quantity of rock mined during this fortnight was 3134 cubic feet.

The 270 foot level south has been driven 21 feet 3 inches, or 208 feet from the crosscut. The quartz still continues small, being about 12 inches wide. Nothing of value has been met with since last report.—Tennant's shaft. This shaft has been sunk 6 feet, or 106 feet below the 600 foot levels, and being now down the necessary depth for the new or 700 foot level. We have discontinued the sinking and put the men to cut ground for the top plat, which will be finished within a few days. We have also driven the 700 foot levels north and south, the measurement in each drive is 9 feet. The lode is without material alteration. The crosscut east at the 500 foot level has been extended 27 feet, total measurement 43 feet 3 inches. The crosscut west at the 420 foot level has been advanced 22 feet 3 inches, or 12 feet 3 inches from the level. Nothing of importance has been met with in either crosscut.—Surface. The cyanide works are being pushed on with satisfactory speed. We expect the machinery shortly.

**BAILEY'S REWARD CLAIM.**—Mining report dated Coolgardie, West Australia, August 31: The following is the work done for the week ending August 30. Sylvester shaft, 380 feet level, south drive extended 11 feet. The small vein of quartz mentioned in my last, like the others, disappeared; still the walls, now slightly narrower, go on, and I see nothing else for it but to continue driving and follow them. Total length of drive is 161 feet from crosscut. The filling between the walls carries no gold.—100 feet level. The stopes directly under this level is being continued, but so far no gold has been seen in the working, the quartz being sent to the battery. No other work is being done at this level.—Gordon shaft, 50 feet. South drive continued 4 feet for week and holed through to Green shaft. A winze was then started in the drive, about 28 feet north of Green shaft, but will not be continued just yet.—Beagle shaft, 30 feet level south. A rise is being put in here about 40 feet north of shaft to connect with surface so as to allow of a block of stone being worked, Everard's air shaft, north stope. This stope continues to look well though the reef is not very wide, averaging about 18 inches through the week; fine gold occasionally seen. This stone is going direct to the battery. No stoping has been done south of this shaft for the week.—Everard shaft, 20 feet stope north. I have had two men working one shift here during the week, and yesterday they struck some very nice stone showing fair gold. The stone from here is also being tracked direct to the battery.—Machinery. All the machinery is running smoothly. We had a little trouble with the oil engine though it getting too hot, the capacity of her cooling tanks not being sufficient for a continuous run of 24 hours. We have added two more larger tanks which does away with all this. The engine house is in course of construction.—(Signed) Tom V. Browne, acting manager.

BAYLEY'S WEST GOLD.—The company's manager at Coolgardie reports under date September 16 as follows: As I pointed out in my last report, the reef we are sinking for will prove to be a continuation of the Reward reef, and as No. 3 shaft gets deeper the more firmly am I convinced that this will prove to be correct, as the country rock at the bottom of No. 3 shaft is exactly the same character as the Reward reef is in, and is underlying at about the same angle.

**BLUE SPUR AND GABRIEL'S GULLY CONSOLIDATED.**—The following are extracts from a letter from the mine manager, September 3:—"The floor of the paddock, as far as it is picked in, looking very well, and I shall be disappointed if it does not prove sufficient to enable me to pay off a further sum of £1000. Then I am confident that the clean up to be made at the end of December will not only wipe out the balance of the debt, but leave considerable margin available for other purposes. I hope that by the date for the dispatch of the next mail that the mine will be in full work again, and that I may be able to report a satisfactory sum from the paddock now being cleaned up."

**BAYLEY'S REWARD NO. 1 SOUTH.** — Mining report, started Coolgoolah, W.A., August 31: The work done for the week ending August 30 is as follows:—170 feet level, north drive. Excavated for week, 4 feet. No change in appearance of face, the reef continuing 4 feet. No change in appearance of face, the reef continuing 5 feet wide. 33 tons of stone were crushed for the fortnight from here.—120 feet level. Winze south of shaft sunk ~~week~~ 3 feet. Stone very hard to work indeed, total depth of 17 feet 6 inches; fine gold continually seen during breaking stones. The crosscut 30 feet north of shaft put in 14 feet south, and struck reef in winze coming down from 90 feet level. The reef is, on an average, 18 inches wide, and carries very nice coarse gold in places. A tram line has been put in, and driving started on the reef, both north and south. Reef 2 feet 6 inches in south, and going back towards shaft.—90 feet level. The winze from this level has been sunk 9 feet for week, making a total of 32 feet to bottom of drive in the crosscut. The reef averaged 15 inches all the way down, but now appears to be widening. As soon as these drives are in far enough shall commence stoping both sides of winze. Altogether this new reef, or splice of the old one, worked particularly well. I wired you to that effect yesterday. Battery. We have had some trouble here again this week with a portable engine, which necessitated a good deal of stopping the boiler tubes having to be caulked twice; also the boiler itself blown off and cleaned. This accounts for the comparatively small amount of stone crushed, one 5-head being engaged in public work all the time. Stone crushed for fortnight 60 tons, for a yield of 49 ounces. (170) Bottom level, north drive, 33 tons; 120 feet level, winze south, 10 tons; 90 feet level, winze north, 17 tons. Total crushed, 60 tons. (Signed) Tom Brown, acting manager.  
**CHIAPAS.** — Mining report for fortnight ending October 12, 1895.

CHIAPAS.—Mine report for fortnight ending September 15: Providencia Aver drift driven 5 feet, total 375 feet. Suspended, proving established the fact of being in the igneous formation. Cerro de la Peña hill, drift No. 2, crescent east, driven 30 feet under open cut, but have not discovered ore. Santa Fé hill, drift No. 3, driven 10 feet, total 134 feet. No change. Taylor main extension driven 100 feet, total 658 feet. Shows 2 dwts. 12 grains of gold by assay, but

no perceptible change in the rock. Sylva crosscut No. 3 driven 1 foot, total 47 feet. No change. San Juan crosscut driven 12 feet, total 61 feet. Providencia crosscut east, No. 1, driven 20 feet, total 187 feet. Both these last drifts are looking very favourable, being on the same run of ore, I give the assays together:—Gold 3 dwts. 12 grains, and 5 dwts. silver, 9 ounces 9 dwts., and 4 ounces 15 dwts. copper 664 per cent, and 2 $\frac{1}{4}$  per cent.—Extraction. Old Providence. 434 tons from lower part of stope sent to mill, assays 1 dwts. gold, 14 ounces 19 dwts. silver, and 4 $\frac{3}{4}$  per cent. copper. Santa Fe :stope east extracted 192 tons, assays 4 dwts. gold, 4 ounces 1 dwts. silver, and 1 $\frac{3}{4}$  per cent. copper. Taylor No. 3 stope extracted 57 tons, assays 7 dwts. 12 grains gold, 6 ounces 3 dwts. silver and 2 $\frac{5}{5}$  per cent. copper. Santa Fe :stope hatched 102 tons, assays 19 dwts. 12 grains gold, 9 ounces 2 dwts. 12 grains silver, and 4 $\frac{1}{2}$  per cent. copper.

per cent. copper.

**GOLDEN DOVE.**—The following is an extract from the report of Mr. Jones (the company's new manager) under date September 25. Since my arrival here I have closely inspected the different workings, viz; Golden Dove Black, Golden Dove reef No. 1 shaft, Golden Dove reef No. 2 shaft, Scott's Lead No. 1 shaft, Scott's Lead No. shaft, Michael reef and drive to cut lower levels. From panning taken from various parts of each of these reefs, I am of opinion that you hold a very valuable block of claim\*, which by judicious working should yield a handsome dividend. There are numerous other reefs on the property still unopened,—Marais block. There have been two reefs already opened up in this block in addition to numerous outcrops of others reefs. Pannings from the two reefs show good payable gold. Judging from the daily applications we have for work, I do not anticipate any trouble as regards supply of labour. We are now busy preparing the battery site, and I hope in a few days to get the machinery across the river, which I do not anticipate will be a very difficult matter.

**KALGURLI GREAT WESTERN.**—Mr. John James, the mining engineer to the Explorers' Syndicate in the Coolgardie gold field, writes as follows, under date September 9: I can confirm Robert Gibson's report upon the property. He is a good and reliable man. I have put four men to work upon a particular portion of the property, and should not be surprised to hear of them cutting the Richmond lode any day."—P.S. By cable since above date, information of the cutting of the lode has been received. Advice by cable of the transfer of the property into the name of the company has been received from the solicitor in Coolgardie.

**mysore gold.**—R. Hancock, October 2: Mining operations for the fortnight ending September 30: Rowse's shaft, 1460 feet level north of crosscut west. This end has been driven 15 feet making a total distance driven of 231 feet; there is nothing here to report. 1460 feet level north of sump winge. This level has been driven 21 feet, making a total distance driven of 404 feet. The lode is 3 feet 6 inches wide, assaying 1 ounce 7 dwt. 10 grains. The rise in the back of this level has been put up 11 feet, making a total height of 46 feet. The lode is 4 feet wide, assaying 1 oz. dwts. 6 grains. 1460 feet level south of sump winge. Driving south from bottom of the south winge. Driven 23 feet, making total distance driven of 201 feet. 1360 feet level south of crosscut. There are 2 stopes in the back of this level, the average width of the lode being 1 foot 3 inches, giving an average assay of 14 dwts. 15 grains. 1360 feet level north of crosscut. The

of 14 dwts. 15 grains. 1360 feet level north of crosscut. The winze in the bottom of this level has been sunk 1 foot 6 inches, making a total depth of 77 feet. The lode is 1 foot wide, assaying 6 dwts. 12 grains. The lode in the stopes in the back of this level is 3 feet wide, assaying 5 dwts. 5 grains. 1360 feet level north of sump winze. This level has been driven 19 feet 6 inches, making a total distance driven of 256 feet 6 inches, the lode is 3 feet wide, assaying 6 dwts. 12 grains. 1360 feet level south of sump winze. The rise in the back of this level has been put up 18 feet, making a total height of 60 feet. The lode is 3 feet wide, assaying 6 dwts. 12 grains. 1260 feet level N.N.E. This level has been driven 17 feet, making a total distance driven of 893 feet. There are 8 stones in the back of this level, the average width of the lode being 3 feet 2 inches, giving an average assay of 17 dwts. 2 grains. 1260 feet level south. This level has been driven 22 feet, making a total distance driven of 228 feet 6 inches. The lode is 1 foot wide, assaying 1 ounce 12 dwts. 19 grains. There are three stopes in the level, the average width of the lode being 3 feet, giving an average assay of 14 dwts. 3 grains.—1160 feet level north north-east. This level has been driven 21 feet, making a total distance driven of 647 feet 6 inches. The lode in the stopes in the back of this level is 1 foot 6 inches wide, assaying 1 ounce 9 dwts. 3 grains.—1160 feet level south. This level has been driven 19 feet, making a total distance driven of 583 feet 6 inches. There is nothing here to report. The rise in the back of this level has been put up 14 feet, making a total height of 62 feet. The lode is 3 feet wide, assaying 6 dwts. 12 grains. There are four stopes in this level, the average width of the lode being 1 foot 2 inches, giving an average assay of 1 ounce 2 dwts. 20 grains.—North of the crosscut east. The lode in the stopes in the back of this level is 2 feet wide, assaying 2 ounces.—1060 feet level north of No. 1 crosscut. This level has been driven 24 feet, making a total distance

crosscut. This level has been driven 24 feet, making a total distance driven of 105 feet. The lode is 5 feet wide, assaying 2 ounces. The wine in the bottom in the end of the crosscut has been sunk 10 feet, making a total depth of 30 feet 6 inches. The lode is 5 feet wide, assaying 1 ounce 6 dwts. 4 grains. —1060 feet level south of No. 2 crosscut. This end has been driven 19 feet, making a total distance driven of 79 feet 6 inches. The lode is 4 feet wide, assaying 15 dwts. 4 grains. 890 feet level north. The lode is in the stop in the back of this level.

is 3 feet wide, assaying 1 ounce 0 dwt., 21 grains.—890 feet level north of crosscut. This level has been driven 24 feet 6 inches, making a total distance driven of 493 feet. The lode is 5 feet wide, assaying 1 ounce 13 dwt.s. The winze in the bottom of this level has been sunk 10 feet, making a total depth of 103 feet 6 inches. The lode is 1 foot 6 inches wide, assaying 1 ounce 12 dwt.s, 16 grains. There are three stopes in the back of this level, the average width of the lode being 2 feet 10 inches, giving an average assay of 1 ounce 7 dwt.s, 11 grains.—780 feet level north. The lode in the stope in the back of this level is 3 feet wide, assaying 15 dwt.s, 15 grains.—780 feet level north on new chute. There are eight stopes in this level, the average width of the lode being 3 feet 8 inches, giving an average assay of 1 ounce.—620 feet level north of crosscut. The lode in the stope in the bottom of this level is 1 foot 6 inches wide, assaying 1 ounce 4 dwt.s, 19 grains.—620 feet level south of crosscut. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 6 dwt.s, 12 grains.—Driving south on the branch in the 620 crosscut east. This end has been driven 2 feet, making a total distance driven of 62 feet 6 inches. The lode is 6 inches wide, assaying 3 dwt.s, 6 grains.—Crocker's shaft. We have resumed the sinking of this shaft. Sunk 20 feet, making a total depth of 41 feet 6 inches below the 890.—236 feet level north. The lode in the stope in the back of this level is 1 foot wide, assaying 4 dwt.s, 13 grains.—Taylor's shaft, 466 feet level north. The lode in the stope in the back of this level is 2 feet wide, assaying 5 dwt.s, 12 grains.—Glibert's shaft. This shaft has been sunk 7 feet, making a total depth of 68 feet below the 650 feet level. Owing to the water being in, sinking was hindered for four days, during which time the machine was put to take away a piece of quartz in the 650 feet level north.—520 feet level north. There are three stopes in the back of this level, the average width of the lode being 2 feet 2 inches, giving an average assay of 11 dwt.s, 23 grains.—520 feet level south. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 1 ounce 13 dwt.s.—480 feet level north. The lode in

wide, assaying 1 ounce 13 dwt.—430 feet level north. The lode in the stope in the bottom of this level is 1 foot 8 inches wide, assaying 10 dwt., 10 grains.—360 feet level north. The lode in the stopes in the bottom of this level is 1 foot 6 inches wide, assaying 5 dwt., 5 grains.—290 feet level north. There are two stopes in the back of this level, the average width of the lode being 2 feet 1 inch, giving an average assay of 14 dwt., 23 grains.—290 feet level south. The lode in the stopes in the back of this level is 2 feet wide, assaying 5 dwt., 5 grains.—180 feet level south. There are two stopes in the back of this level, the average width of the lode being 2 feet 9 inches, giving an average assay of 10 dwt., 2 grains.—Tennant's shaft, 750 feet level north of crosscut west. This level has been driven 16 feet 6 inches, making a total distance driven of 145 feet. The lode is 1 foot 2 inches wide, assaying 7 dwt., 19 grains.—290 feet level south. The lode in the stopes in the back

of this level is 1 foot wide, assaying 18 dwts. 1 grain.—Schaw's shaft, 450 level north of crosscut. There are three stopes in the back of this level, the average width of the lode being 1 foot 3 inches giving an average assay of 1 ounce 3 dwts. 12 grains.—450 feet level south of crosscut. This level has been driven 2 feet 3 inches, making a total distance driven of 345 feet 3 inches. There are two stopes in the back of this level, the average width of the lode being 1 foot 10 inches, giving an average assay of 3 dwts. 22 grains.—McTaggart's shaft. This shaft has been sunk 7 feet 6 inches, making a total depth of 104 feet 9 inches below the 550.—550 feet level north. This level has been driven 11 feet 3 inches, making a total distance driven of 232 feet 2 inches.—550 feet level south of crosscut west. This level has been driven 12 feet 3 inches, making a total distance of 198 feet 3 inches, the lode is 1 foot wide mixed, no assay made. The wing in the bottom of this level has been sunk 6 feet 6 inches, making a total depth of 22 feet 3 inches, the lode is 2 feet 6 inches wide, assaying 6 dwts. 12 grains. The lode in the stone in the back of this level is 2 feet 6 inches wide, assaying 3 dwts. 22 grains.—320 feet level south. There are three stopes in the back of this level, the average width of the lode being 1 foot 8 inches, giving an average assay of 12 dwts. 4 grains.—Prospect shaft No. 2. This has been sunk 5 feet, making a total depth of 89 feet.—Glen shaft, 250 feet level north. No. 1 crosscut east. This has been driven 3 feet 6 inches, making a total distance driven of 52 feet 6 inches.—Ribbleddale shaft. This shaft has been sunk 10 feet, making a total depth of 72 feet 6 inches below the 1060.—1460 rise. This has been put up 5 feet 6 inches, making a total height of 55 feet.—William's shaft crosscut east from the 173. The men here have been engaged in timbering during the past fortnight. Health good.—Wa'er. All tanks full.

MOUNT ZEEHAN (Tasmania).—Manager reports for week ending September 10: Silver Queen section, No. 8 lode, main shaft, No. 1 level north. Drive on west branch extended 10 feet, total 26 feet. Expect to cut main lode next week and drain No. 1 level, which will permit sinking of No. 1 winze to be resumed. Crescent to east branch extended 9 feet 6 inches, total 28 feet 6 inches. Have cut footwall of east lode, composed of iron pyrites with traces of galena, which we expect will improve as we reach hanging wall.—Queen Extended section. G tributors have sold 17 tons 16 cwt. seconds for £227.7s. netting to us £45. Concentrator has been engaged crushing for tributors and for Zeehan-Montana Company. Machinery working splendidly.

**NUNDYDROOG.**—Thomas Richards, October 2: Report for the fortnight ending September 28. Taylor's shaft. The 1240 feet level south has been driven 15 feet, total distance 37 feet 6 inches. Lode 1 foot wide, assays 1 dwt. 6 grains of gold per ton. The 1240 north has been driven 13 feet, total distance 124 feet. Lode 1 foot wide, contains a trace of gold. In the stopes in the back of the 1000 north the lode is 2 feet wide, and assays 5 dwts. The 920 north has been driven 10 feet, total distance 229 feet. Lode 6 inches wide, assays 3 dwts. 3 grains. In the stopes in the back of the 840 north the lode is 1 foot wide, and assays 1 ounce 17 dwts. 12 grains. The lode in the stopes in the back of the 760 north is 2 feet wide, and assays 7 dwts. 12 grains. In three stopes between the 600 and 520 levels north the lode averages 2 feet in width, and 11 dwts. 6 grains in assay value. The lode in the stopes in the back of the 520 north is 2 feet wide, and assays 8 dwts. 18 grains. In the stopes in the back of the 300 north the lode is 10 inches wide, and assays 10 dwts. Main shaft has been sunk 1 foot 6 inches, total depth 36 feet 6 inches below the 1080 feet level. Lode of no assay value. Owing to the heavy ground encountered this shaft has now to be very securely timbered, and this has much impeded sinking operations. The 1080 feet level north has been driven 20 feet, total distance 230 feet. Lode 1 foot wide, contains a trace of gold. The 1080 north rise has been put up 19 feet 6 inches, total height 43 feet 6 inches. Lode 2 feet wide, assays 3 ounces 10 dwts. In the stopes in the back of the 1000 feet level south the lode is 3 feet 6 inches wide, assays 1 ounce 1 dwt. 6 grains. The 1000 north has been driven 13 feet, total distance 253 feet 9 inches. Lode consists of stringers of quartz of no assay value. The 920 north has been driven 13 feet, total distance 183 feet 6 inches. Lode 1 foot wide, assays a trace of gold. In the stopes in the back of the 920 south the lode 3 feet wide, assays 10 dwts. In two stopes in the back of the 840 south the lode averages 4 feet in width and assays 5 grains in assay value. Nothing of value having been met with in the crosscut east at the 680 north. The drivage will now be continued northwards upon the part of the main lode formerly worked. The 520 north has been driven 18 feet 6 inches, total distance 111 feet 9 inches. Lode 1 foot wide, assays a trace of gold. The 370 north has been driven 9 feet 6 inches, total distance 37 feet. Lode 1 foot 6 inches wide, assays a trace of gold. Kennedy's shaft has been sunk 5 feet 6 inches, total depth 97 feet below the 600 feet level. The 600 south has been driven 18 feet, total distance 211 feet 6 inches. Lode 2 feet wide, assays 2 dwts. 12 grains. The 600 north has been driven 5 feet 6 inches, total distance 231 feet 6 inches. Lode 2 feet wide, assays 1 dwt. 6 grains. The 600 north rise has been put up 24 feet, total height 36 feet. Lode 1 foot 6 inches wide, assays 3 dwts. 3 grains. The 220 north has been driven 12 feet 6 inches.

assays 3 dwts., 3 grains. The 520 south has been driven 6 feet 6 inches, total distance 669 feet 6 inches. Lode 9 inches wide, of no assay value. The 520 south rise has been put up 23 feet, total height 49 feet. Lode 6 inches wide, assays a trace of gold. The 520 crosscut west (near north shaft) has been extended 3 feet 9 inches, total distance 14 feet 9 inches. Some stringers of quartz have been met with. The 440 south has been driven 17 feet 6 inches, total distance 1128 feet 6 inches. Lode 4 feet wide, of no assay value. A crosscut has been driven 46 feet eastward (in the foot-wall) at this level, at 811 feet from Kennedy's shaft, and only a few small branches of quartz of no assay value have been met with. A crosscut has now been commenced westward at 965 feet from the shaft. In the stope in the back of this level the lode is 4 feet wide, and assays 3 ounces 5 dwts. The lode in the stope in the bottom of 440 north (part carried) is 11 feet wide, and assays 12 dwts., 12 grains. The 370 south has been driven 23 feet 6 inches, total distance 830 feet. Lode 2 feet wide, assays a trace of gold. The 370 south rise has been put up 22 feet, total height 36 feet. Lode 1 foot 6 inches wide, assays 2 ounces 13 dwts., 18 grains. The 370 north crosscut west has been extended 7 feet 6 inches, total distance 366 feet. Stringers of quartz have been met with. In the stops in the back of the 370 north, the lode, 10 feet wide, assays 17 dwts., 12 grains. The 300 south has been driven 22 feet, total distance 753 feet. Lode 1 foot wide, assays a trace of gold. The 300 south crosscut east has been extended 3 feet 9 inches, total distance 12 feet 3 inches. A small branch of quartz which assays 8 dwts., 18 grains has been met with. In the stope in the back of the 300 south, the lode, 8 inches wide, assays 2 ounces 2 dwts., 12 grains. The 300 north rise has been put up 12 feet, total height 28 feet. Lode 3 inches wide, assays 2 dwts., 12 grains. The 230 south has been driven 24 feet, total distance 94 feet. Lode 6 inches wide, assays 2 ounces 16 dwts., 6 grains. The 230 north rise has been put up 9 feet, total height 22 feet. Lode 6 inches wide, assays 7 dwts., 12 grains. In the stope in the back of this level the lode is 3 feet wide, and assays 11 dwts., 6 grains. The 160 south has been driven 6 feet 6 inches, total distance 404 feet. Lode 6 inches wide is of no assay value. In the stope in the back of the 160 north the lode is 3 feet wide, and assays 1 ounce of gold per ton. North shaft has been sunk 4 feet 6 inches, total depth 83 feet 6 inches below the 520 feet level. Lode 5 inches wide, of no assay value.—Old mill samples. Pulp 1 ounce 2 dwts., 12 grains; tailings 4 dwts.—New mill samples. Pulp 1 ounce 7 dwts.,

**YERRAKONDA.**—Fortnightly report of Captain M. Scantlebury, mine agent, dated October 2:—Beresford's shaft. This shaft has been sunk 13 feet 3 inches, now 120 feet 6 inches below the 300 feet level. The lode is 5 feet wide, composed chiefly of dark blue quartz, which is worth  $2\frac{1}{2}$  dwt.s of gold to the ton. Both shaft has been sunk 8 feet, now 170 feet from surface. The lode is 3 feet wide, composed of quartz, which assays 3 dwt.s, 6 grains of gold to the ton. Prospect shaft south has been sunk 5 feet, now 77 feet 6 inches from surface. The lode appears now to be forming itself. It is 4 feet wide, with a slight dip to the west. The last sample from it gave 4 dwt.s, 6 grains of gold to the ton.—Prospecting on Lakkanianahalli block. We have sunk a trial shaft in an ancient working 19 feet. We appear to be at the bottom, but are not quite certain.

## THE KOOTENAY MINES, BRITISH COLUMBIA.

A sketch of their progress and present condition, with letters from the Similkameen and Kettle river camps, from the Special Correspondent of "The Miner."

(Continued from Page 1259).

### Kaslo.

**O**N the west shore of the lake, about 10 miles north of Ainsworth, is situated the City of Energy, known on the map as Kaslo.

In the country at the back of it, and roughly speaking, midway between the Kootenay and Arrow lakes, lies the great Slocan mining district whence comes the richest galena in the world. Its trade is a constant bone of contention between the two great waterways, and Kaslo has struggled nobly to hold up her end in spite of terrible reverses under any one of which a town might have succumbed.

Kaslo is a thoroughly American mining town, and consequently it is not altogether the peaceful and prosperous hamlet that might be met with in the farming districts of Ontario. It is a busy, bustling place with more saloons than there appears at first sight to be any necessity for. The streets are roughly graded; in many the stumps of trees and huge rocks are left standing. In the good times before the "slump" in silver people were so busy taking in the dollars, and then so busy spending them, that no one had time to attend to a trifle or two like that. And then again to men accustomed to mountain trails the streets were veritable paths of peace. Times like that seldom last, and knowing people reflected that there would probably be time after the first boom was over, and before the second came on, to tidy up the town a bit. They were right both in their philosophy and conjecture. There has been lots of time between the end of the first boom and the second just beginning to arrange things. This they have done chiefly by incorporating themselves and putting a Mayor and aldermen over them to impose taxes upon them. This somewhat doubtful blessing, however, seems to meet with approval, and if the dollar somewhat reluctantly leaves the ratepayer's pocket, that individual rejoices in better streets and in protection from the terrible river, and even dreams of waterworks in the near future.

The "slump" in silver was Kaslo's first blow. That nearly, in the language of the west, "knocked her endways." Then in the early spring of 1894 came the great fire, destroying all one side of Front-street, on which the principal business places were situated, and a considerable part of the other side as well. No sooner were the ashes cold than the plucky people commenced to accommodate themselves in tents and shanties of all kinds, and things went on much as ever until June of the same year. Kaslo is built upon a broad bench of shingle extending out into the lake, and formed by the Kaslo river, which here comes out of the mountains. In June, 1895, the annual flood in the lake, caused by the melting of the snow on the Rockies and Selkirk Mountains, rose about 15 feet higher than was ever known before. On Sunday, June 3rd, the whole of the Kootenay country was visited by a terrible cyclone, accompanied by a scorching wind, such as makes all Australians shudder to think of, torrents of rain and terrific thunder and lightning. Kaslo was, as it were, up to its knees in the lake, and when the great storm swept up all the way from the head of the lake, 40 or 50 miles away, it sent a resistless sea rippling and tearing among the defenceless wooden houses. That night half the people in Kaslo were homeless, and their troubles were not over. While the waves on the lake were dashing the houses to pieces, the hot breath of the cyclone was tearing up the great snowdrifts that lay high up amid the glaciers on the mountains whence the Kaslo river springs. Early on Monday morning the river began to rise as it had never risen before, and by 10 a.m. it had torn out nearly all that the fire and storm had left of Kaslo.

And yet to-day Kaslo is nearly as busy as ever, her people smile at you, confident in their town, confident in their future, confident in their pluck. Nor is their confidence blind. A railway is building and will be in working order in a month or two (about October) which runs right to the doors of the chief mines of the Slocan. The other line, owned by the Canadian Pacific Railway, which served to haul out ore from these mines last year along the rival route to the west, does not go so near the mines as the Kaslo railway does by about 3½ miles, and there is a rise of something like 1000 feet, which is a serious climb for a railway in that short distance. Kaslo, therefore, expects to be the shipping point for all the Slocan ore. Only about 5000 tons were sent out last year, but this amount will be largely increased this winter, especially if greater facilities of transport are available.

### The Slocan.

Between the basin of the Kootenay and that of the Columbia is a smaller valley in which lies the Slocan Lake, a splendid sheet of water over 20 miles long and surrounded by some of the finest mountain scenery in the world. It drains itself by means of the Slocan river, which runs southwards and joins the Kootenay river about half-way between Nelson and Robson.

This lake gives its name to the great argenterous region lying between it and the Kootenay lake.

To describe all the mines that are therein situated would take up more room than is at our disposal, while to give an account of all the good prospects, many of them largely developed, would require a volume. Our object is simply to give our readers an idea of the value of this country and an account of what has actually been done in it. In this we are much aided by a well-compiled supplement, which was issued by the *Kaslo Prospector* in March last, and which the Editor of that paper has kindly placed at our disposal. It may be also a fitting time here to express our thanks to the many mineowners who have been so good as to place figures and other information of a private character at our service, by means of which we have been enabled to check the returns found in statistical form at the end of these pages.

The best known and most largely developed of all the mines of this district is the Slocan Star, situated on Sandon creek. High up above the creek the ledge outcrops and then dips into the mountain at an anticlinal to the surface. Four tunnels at different elevations tap and cut the vein. The upper tunnel is 70 feet in length and cuts the vein 70 feet from the outcrop. It thus forms the base of an isosceles triangle of which the vein itself and the surface are the two sides. No. 2 tunnel is 45 feet vertically below No. 1, and No. 3 is 135 feet below No. 2, while No. 4 is 425 feet below No. 1. These tunnels are all connected by winzes and uprises, and many feet of drifting along the vein has been cut. The vein at No. 3 is over 50 feet thick, of which the first 10 or 12 feet are first-class ore requiring only to be bagged and shipped

straight to the smelters. The assay value of this ore is 125 ounces of silver and 74 per cent. of lead to the ton. The amount of ore in sight is enormous. For the 12 months ending May 31 last 2800 tons from this mine were shipped, of which 2500 tons went to the Omaha and Grant smelters and 300 tons to Tacoma. This ore had to be hauled down on sleighs to the terminus of the railway at Three Forks, a distance of some 5 or 6 miles. This year the completion of the Kaslo Railway will bring the cars close under the mine itself, and with such increased facilities the shipments will be much larger.

Other Slocan mines which actually ship ore are the Alamo, the Idaho, and Cumberland, owned by a Duluth syndicate, who have erected a concentrator near Three Forks, connected with their mines by a gravity tramway; the Rueccau, Noble Five, Wonderful, Mountain Chief, Goodenough, Alpha, and several others. The amount they sent out in the period mentioned above was close on 7000 tons. The value, as declared to H.M. Customs was \$100 a ton, making a total of over \$700,000.

The agent for the Omaha and Grant smelter, to which nearly 5000 tons was sent, has favoured us with the actual returns from 2114 tons of ore contributed from various mines. This amount gave a net return, after deducting 5 per cent. silver and 10 per cent. lead, of 241,336 ounces of silver and 1224 tons of lead. The average product per ton is thus 114 ounces of silver and nearly 60 per cent. of lead. Taking the price of silver to-day (August) at 66, and of lead 320 per cwt., the net value of that ore, after paying all expenses of freight and smelting, is \$113.64 per ton.

Most of these great galena properties lie on the mountains round the South Fork of Carpenter creek, which runs westward into the Slocan lake. On the North Fork are several claims with ledges of dry ore (silver and iron without the lead). From one of these claims in the same belt, the owner informs us that a small shipment of picked ore sent to the Pilot Bay smelter went as high as 900 ounces of silver. The vein, which is from 18 inches to 2 feet in width, averages 200 ounces. This dry ore belt extends from Rosebery, a little hamlet at the mouth of Wilson creek on Slocan lake, eastward through the country drained by the North Fork of Carpenter creek nearly to the Kootenay lake, a distance of some 12 or 15 miles. Quite recently some phenomenal discoveries of dry ore with large masses of native silver have been made on the creeks flowing westward into the south end of Slocan lake. The discovery of the Fishermaiden last year in the same direction has lately attracted attention to this part. This claim shipped 50 tons of ore to the smelter last year, which yielded 265 ounces of silver to the ton, one carload yielding as high as 347 ounces per ton. At present, this part of the country is still in the hands of the prospector, and many strikes are being made, of which some at least will make mines, and public attention will no doubt shortly be turned to them.

The following is a list of a few of the chief mines of the Slocan with their characteristics:

- Blue Bird—Development, 1800 feet tunnelling and 200 feet shafts; 240 tons have been shipped. Average assay, 137 ounces silver and 75 per cent. lead.
- Mountain Chief has shipped 800 tons. The average of 100 tons of this was 214 ounces of silver and 71½ per cent. of lead.
- Idaho and St. John, two parallel claims; 750 tons clean ore shipped averaging 140 ounces of silver and 65 per cent. lead. The owners had about 7 tons of ore on the bank, consisting principally of grey copper and antimonial silver, which carried over 3000 ounces of silver to the ton.
- The Alamo belongs to the same parties as the last; 675 feet tunnels and 160 feet shafts. Ore averages 200 ounces in silver and 60 per cent. lead.
- Deadman, adjoining Noble Five. One car load only as sample, shipped to Omaha. Ore averages 150 ounces in silver and 50 per cent. lead.
- Washington.—Over 1000 feet of tunnelling and shafting; 1500 tons of ore shipped; averaged 140 ounces in silver and 60 per cent. lead.
- Rueccau shipped 350 tons; 80 tons gave a return of 176 ounces silver and 76 per cent. lead.
- Noble Five Group.—1700 feet of development work. Shipments amount to 550 tons. Value of ore, 150 ounces of silver and 70 per cent. lead.
- Alpha.—Development work, 500 feet tunnelling. Ore value 105 ounces silver and 64 per cent. lead. Total shipments, 1000 tons to Omaha and Grant smelter.

Good Enough.—A fractional claim adjoining the Rueccau. From a shipment of 21 tons the galena returned 788 ounces of silver per ton and 66 per cent. lead, and the carbonates yielded 375 ounces of silver per ton and 17 per cent. lead.

Ruth.—A claim close to the Slocan Star. Shipped 66½ tons. Ore runs from 115 to 130 ounces in silver, and 73 to 79 per cent. lead.

Last Chance has shipped 110 tons. After paying freight, duty, and treatment they returned \$8000. Cost of mining, \$1200; net value, \$6800; average per ton, \$61.90.

Fisher-maiden.—50 tons of ore shipped, averaging 230 ounces in silver and 10 per cent. lead.

Most of this information has been taken from the figures contained in the report of the Minister of Mines.

Speaking of the new discoveries at the south end of Slocan lake, the same document says:—On Eight Mile and Ten Mile creeks numerous discoveries were made this summer (1894). The Kalispell, on Ten Mile creek, is the most promising. The locators are at work, and have 7 tons of ore averaging between 400 and 500 ounces of silver to the ton.

The capital of the Slocan is New Denver, a little town most picturesquely situated on the east side of Slocan lake, at the mouth of Carpenter creek. Five miles up the creek, where its three branches join, is Three Forks, and still further up the South Fork is Sandon, for the present the terminus of the Kaslo Railway. North of New Denver on the lake is Rosebery, a new village of inconsiderable proportions. At the south end of the lake (on the maps) is Slocan City. In consequence of the remarkable finds in this vicinity, the town is apparently materialising, and lots therein have actually been sold for hard cash. From the Slocan lake an excellent trail leads down the left bank of the river to its junction with the Kootenay. It is expected that before long the Canadian Pacific Railway will build up this river from its Nelson and Robson line.

### Trail Creek.

Many years ago the old Hudson's Bay trail connecting Eastern Kootenay with the rest of British Columbia, crossed the Columbia river about 20 miles north of the international boundary, and going westward led up to the divide by means of an easy canyon. The stream at its bottom became known as Trail Creek. The old trappers and hunters who frequented this route could not hear in the murmur of the little brook the word gold, and for years their moccassins patiently trod ground that is almost unpurchasable to-day. About 7 miles up the creek is Red Mountain, and here, five or six years ago, the first claims were staked. For one reason or another they attracted no notice until the autumn of 1894. The ore is of a refractory nature, and five years ago its treatment was a problem not quite removed from the experimental stage. While ore of various kinds, including both free milling quartz and galena, is found

in the mines of Trail, its typical product is a pyritic iron, carrying gold and copper. About November, 1894, mining matters in the Western States and throughout British Columbia being flat, the wave of public attention rolled towards Trail Creek. It's two chief properties—the Le Roi and the War Eagle—were acquired by syndicates composed of keen American mining men, the owners of the town-site of Rossland put their wares on the market, the journalist hungering for novelty sent the magic word "gold" from end to end of the States, and in six months 2000 people swarmed at Rossland and in its neighbourhood. Hundreds of claims are staked in every direction, and many new finds of valuable mineral have been discovered. No sooner are bonded. Not long ago a bond of \$75,000 on a group of claims was regarded as a high figure. Recently we have heard of a group being held under the unprecedented figure of \$200,000.

For the information of our foreign readers we may mention that bonding a claim consists in undertaking to pay a certain sum for it at a future time or times, a small amount in cash, rarely exceeding 5 per cent. of the whole, being paid down to bind the bargain.

At present there are virtually only three shipping mines at the camp, but the tables at the end will show that they have sent away no inconsiderable amount, and it has practically all been shipped since January of this year. The whole of this ore has to be hauled by wagons in summer and by sleighs in winter by road to the river. There are two roads. One to Trail Landing, seven miles in length, and the other 14 miles to Northport on the Spokane Falls and Northern Railway in the State of Washington. Both this railway and the Canadian Pacific Railway are laying their plans so that when the future of the camp is assured, and one or two more of the present properties have become mines in the full sense of the word, they will be ready to construct railroads in for the transport of the ore. Under the title of the Red Mountain Railway the Spokane Falls and Northern Railway has obtained a charter from the Dominion Government, and has actually commenced work in a mild kind of a way, but it is at present hung-up on account of some difficulty with the United States Government about an Indian reserve through which it passes on the other side. The Canadian Pacific Railway has a survey party in the field, and will probably build, when it does, up the river to connect with its line at Robson.

In January last the Special Correspondent of *The Miner* wrote as follows of Rossland and the Trail Creek camp:—

"An easy pull of 7 miles from Trail Landing on the Columbia, up a well graded road, brings us to Rossland. On the way we pass sleigh after sleigh—20 in all—bringing down 3½ tons each of glittering ore from the mines. All that glitters is not gold. In this instance, though there is plenty of gold in the shining lumps of hard rock, the glitter is that of iron pyrites. Each of the sleigh-loads is worth in the neighbourhood of \$200. At the top the valley widens out. The hills around it rise gently to their summits in broad benches. On the broadest of these, and in the centre of a broad, natural amphitheatre, the town is situated. The drama of the place, however, is not being enacted on the level central stage, but in the hills that rise tier upon tier around. To the north-west rises the Red mountain, lifting its sharp peak 1500 feet above the town. Through its immost recesses thread veins of gold. Already these are tapped by the Nickel Plate, the Le Roi and the War Eagle. The clatter of the ore falling into the bins is audible all day long. The entire hill is plastered with claims. On its very summit are the St. Elmo, Cliff and Mountain View. It will no longer be allowed to retain the treasures it has been guarding for ages. To the eastward of the Red mountain, divided from it by a small ravine, and due north of the town, is the Monte Cristo mountain. Already rich veins have been discovered there, and, in spite of the frost, the miner is busy there, too. Still further eastward is the Columbia mountain. Over the west shoulder of the Red mountain rises the Spokane mountain, and between the two runs Sheep creek, down which winds the roads to Northport, and up which will come the Red Mountain Railway. In the valley of Sheep Creek is the L.X.L., from which very rich specimens of free milling quartz were brought. Further again to the west and almost south of Rossland are the O.K., Lillie May, and other claims. In fact, the only side on which there are none is the south-east, in which the valley falls away to the Columbia. . . . It is a little difficult to gauge the population, as many of the men are in the surrounding mines, and it must be remembered that a census of to-day is no criterion of the population to-morrow. Every day people are coming in. If we say that on this 19th day of January in the year of our Lord 1895 there are 300 people in the camp we are probably not far off the mark. In two, four, or six months it will be interesting to note how this will be increased to possibly as many thousands."

To-day there is considerably over 2000, probably nearer 3000. "The only two mines at present shipping are the Le Roi and the War Eagle, but others will quickly follow suit, notably the Nickel Plate. This latter has a shaft down some 70 feet, and on the day of our visit had about 12 tons of the richest ore in camp on the bank. The Le Roi and the War Eagle are just above the Nickel Plate. . . . The tunnel in the War Eagle cuts the vein at angles and drifts proceed from it on either hand, and stoping is in full operation. The lode here lies between well-defined walls, and is fully 4½ feet in thickness. Another tunnel, 112 feet below the first, is being rapidly driven in, and it has already cut another vein even richer than the one it was designed to meet. On the surface cross-stripping has disclosed the main lode over a distance of 500 feet, and here it widens in some places to 20 feet, and maintains an average breadth of 7 feet. The ore, like that of most of the camp, is a pyritic iron carrying gold and copper. It lies embedded in walls of syenite, of which the country rock is composed. Its value naturally varies. There are large deposits of low grade stuff which will not pay for shipment, but which will yield handsome returns if reduction facilities can be obtained near at hand, and there is ore that gives returns of nearly \$200 in gold per ton. The War Eagle ore, of which from 40 to 50 tons are now being shipped daily, is worth about \$45 per ton. The expenses of shipping ore are as follows per ton:—Mining, \$3; freight to Trail landing by sleigh, \$2.25; trail to smelter and smelting, \$12.50; total, \$17.75. The profit is evident."

Since these lines were written not only has the population become thousands instead of hundreds, but many new discoveries of mineral have been made, and the development of previous discoveries has shown that they contain valuable ledges. Particularly in this case with the Kootenay, the Commander, and the Iron Horse. The second of these three is an instance of a prospector's acuteness, not unmixed with luck. Two men had been at work for months examining the ground now occupied by the Commander. They felt certain from outside indications that a vein of mineral existed in that direction, but they could not find it. A prospector, well known for his ability and luck, by the name of "Billy" Lynch was called in. He directed his attention after a preliminary search to a swamp, then barely covered by the snow, and there sure enough he found a piece of rock outcropping that looked like the expected ledge. To drain the swamp and expose the vein was a simple matter, and there it was.

In addition to new discoveries and new developments the ore in such mines as the War Eagle has been found to increase in value as depth is gained. So much is this the case that, rightly or wrongly, it is now an accepted characteristic of the Trail Creek Mines. The contents of the War Eagle ore declared for Customs purposes is: Gold, 223 ounces; silver, 4 ounces; copper, 5 per cent. This mine has paid \$132,500 in dividends since it was bought by its present owners in December last. Of this amount, \$32,500 was sufficient to pay off the purchase-money of the mine and all preliminary expenses, the remaining \$100,000 being pure profit.

Not only is all the country adjacent to Rossland covered with claims, but rich finds have been made to the northward. The country in that direction is exceedingly difficult, and the new finds remain at present mere prospects.

The following are some of the transactions in mining property

that have taken place during the year:

Poorman, Novelty, and California—Purchased for \$20,000, and since converted into a stock company.

Pilgrim, Monita, and Surprise—Bonded for \$60,000.

Mountain View—Bonded for \$25,000.

St. Patrick, Mount Hood, and Only One—Bonded for \$30,000.

Monte Cristo, Enterprise, and Iron Horse—bonded for \$50,000.

Maid of Erin and Robert E. Lee—Bonded for \$10,000.

Georgia—Bonded for \$20,000.

Lily May—Bonded for \$25,000.

Kootenay and Columbia—Bonded for \$75,000.

Paris Belle—Bonded amount not stated.

Good Hope—Sold for \$1100.

Nickel Plate—Bonded for \$20,000 cash and 20 per cent. capital stock in a company to be formed.

Mabel—Bonded for \$5000.

Cliff and Consolidated St. Elmo—Bonded amount reported to be \$105,000.

White Elephant Group—Bonded for \$30,000.

Otawa—Sold for \$4500.

St. Mary and St. Juan—Bonded for \$20,000.

Crown Point, White Swan, and Hidden Treasure—Bonded for \$75,000.

Abe Lincoln No. 1—Bonded for \$25,000.

Homestake (recorded June 6, 1890)—Bonded for \$35,000.

Gem, Uncle Sam, and Tiger—Reported to be bonded for \$300,000.

Spotted Tail and Ida—Sold for \$3000 cash.

To go into details of all the hundreds of claims in and around Trail creek, and to give the assays of ore that have been obtained from them would be beyond the scope of this pamphlet. The figures we have given above, coupled with those which will be found in the table appended hereto, will show the actual amount of work being done in the camp. With regard to the shipments, it may be as well to point out that these have been made almost entirely within the first six months of this year. Of the total amount reported only 1282 tons had been sent out prior to January 1, 1895. The export is continually on the increase, and its value during the month of June alone was \$135,000.

#### New Camps.

This term is not strictly accurate, as though they are only being thoroughly prospected this year the localities have been known for some time to contain mineral. As these are still only prospects we shall merely mention their names and general characteristics, commencing with

#### White Grouse Mountain.

which lies to the east and south of Pilot Bay. Here many veins showing copper and gold ore have been found. The camp is some 15 miles from the lake, and is reached by a trail made by the enterprise of the owners from a little town-site known as Davis. Another route is up La France creek, on which also there are claims with good showing.

#### Goat River and Duck Creek

is still further south, and run into the east bank of the Kootenay river before it empties into the lake. Many of the claims in this camp are something more than prospects, a good deal of tunnelling having been done. Assays of ore run high in both copper and gold. The camp is easily accessible from the lake, whence there is good water carriage everywhere.

#### Crawford Creek

is the name of a stream running into a bay of the same name at the back of Pilot Bay. The discoveries here, consisting of both gold and silver, are more recent, and numbers of men are now going. The proximity of this camp to the Pilot Bay smelter will render it valuable if its ledges are found to be continuous.

Ten Mile, Twelve Mile, and Springer Creeks  
all run into the south-eastern end of the Slocan lake. Within the last few weeks discoveries of silver ore of almost fabulous value have been made. Many of the specimens are so thoroughly veined with silver that when the rock is shattered under the hammer the pieces still hang together by the platos and slabs of the white metal. A vein of this stuff is reported of over a foot in width, itself being part of an 8 feet ledge which runs very high. Free milling gold going over \$100 to the ton is also found on some of the claims. The properties in this camp are at present the most prospects. They have been discovered only a few weeks, and no development work has yet been done.

#### The Salmon River

runs southward into the Pend d'Oreille. Many claims are located on its branches and in its bed placer work on a small scale has been carried on for years. Lately some discoveries on Sheep creek have attracted attention, the ore being said to closely resemble that of Trail creek. The line of the Nelson and Spokane Railway follows the Salmon river for a considerable distance.

#### Cariboo Creek

runs into the Arrow lake about 10 miles below Nakusp. Reports of finds of gold quartz come in from this camp, but nothing definite is known about it.

From all over the district comes news of fresh finds backed by specimens of ore, and the local assayers are kept busy. There are indications everywhere of extensive and valuable mineral deposits. In the Silver King, Slocan Star, and Blue Bell these have been proved to be of enormous extent. There are very considerable veins of gold-bearing rock at Trail creek and elsewhere. There is excellent water communication throughout the district and such railway facilities as no other mining field ever had. The mines are sufficiently developed to warrant still further expenditure, which can in many cases be recouped from the ore put out in the process. A few pounds or dollars down will secure a bond for a sufficient length of time to enable a mining man to make up his mind whether or not to pay down his second instalment. The field is almost entirely in the hands of the Americans, many of whom are reaping rich profits out of the business. The main object of this pamphlet is to show to British and other investors in mining property an exact picture of Kootenay as it is to-day, in the hope that they may benefit in the riches that are even now being drawn from her rugged mountains.

#### Output of the Mines.

Table showing the amount of ore actually shipped during the year ending June 30, 1895:

Mines.	Tons.	Tons.
From Nelson— Silver King Mine .....	840	840
From Ainsworth— Number One Mine (concentrates) .....	535	.....
" " (carbonates) .....	90	.....
Little Pail .....	67	.....
Black Diamond .....	150	.....
Highland .....	15	.....
King Solomon .....	10	.....
From the Slocan— Minnesota Silver Company (Concentrates) .....	15	.....
Alpha Mine .....	1,000	.....
Slocan Star .....	2,800	.....
Rueccau .....	331	.....
Alamo .....	450	.....
Idaho .....	1,151	.....
Enterprise .....	101	.....
Mountain Chief .....	131	.....
Gold Hill .....	51	.....
Fisher-maiden .....	47	.....
Noble Five .....	539	.....
Cumberland .....	170	.....
Last Chance .....	80	.....
Payne Group .....	174	.....
Goodenough .....	35	.....
Ruth .....	66	.....
Surprise .....	235	.....
Ruby Silver .....	9	.....
Sovereign .....	15	.....
Dardanelles .....	83	.....
Blue Bird .....	94	.....
Northern Belo .....	122	.....
Deadman .....	21	.....
Cariboo .....	10	.....
Mollie Hughes .....	4	.....
Wonderful .....	34	.....
Yakima .....	20	.....
Antoine .....	33	.....
From Trail Creek— Le Roi .....	4,265	.....
War Eagle .....	4,688	.....
Josie .....	631	.....
Nickel Plate .....	12	.....
Cliff .....	31	.....
Mines sending less than 10 tons each .....	16	.....
Total tons .....	7,782	.....
From the Blue Bell Mine— To the Pilot Bay Smelter, up to May 30th only .....	20,285	.....
Total tons .....	20,285	.....
NOTES ON THE ABOVE.	39,418	.....

Most of these figures have been obtained from shipping manifests corrected in some few instances by returns from the mines themselves. Circumstances were addressed to every mine asking for information, but many were not replied to. The greatest possible care has been taken in compiling this table, and the Editor can confidently assert that it is not over the mark.

Silver King Mine.—Valued for Customs Entry: Silver, \$61,501; copper, \$13,688; total, \$75,189. The manager writes: "In some cases the value realised exceeded the estimated values, in others it was below."

Last Chance Mine.—Amount shipped 67 tons; on hand, 39 tons; total 110 tons, valued at \$5000; less cost of mining, freight, and duty, \$1200; net value \$3800.

Goodenough Mine.—The owner writes: "Shipped 35 tons to Great Falls. Returns amounted to \$8037.82, leaving a profit over all expenses of a little over \$500."

Alpha Mine.—The 1000 tons of ore shipped contained 105 ounces of silver and 54 per cent. of lead to the ton, and netted to the owners about \$55 per ton.

Huth Mine.—Assays on samples from shipments give from 350 ounces to 374 ounces of silver and 30 per cent. lead. Previous shipments ran from 115 ounces to 130 ounces in silver and 73 to 79 per cent. in lead.

Pilot Bay Smelter Returns.—The ore stack was put to blast on March 18, and, with occasional stoppages, has produced up to the end of June, 1895 tons of silver lead bullion.

Table of ore exported as declared to H.M. Customs for year ending June 30, 1895:

Station.	Tons.	Value.
Nelson .....	2,115	\$186,332
Revelstoke .....	6,450	637,744
Kaslo .....	1,245	178,340
Rossland .....	4,013	110,770
Waneta .....	4,215	308,625
Totals .....	18,038	\$1,491,811

#### Mining Records.

FROM JUNE 1, 1894, TO MAY 31, 1895.

Place.	Claims recorded.	Assessments issued.	Crown grants issued.
Nelson .....	116	102	4
Kaslo and Ainsworth .....	312	351	6
New Denver .....	335	410	12
Trail Creek .....	664	74	8
Goat River .....	39	52	0
Totals .....	1466	989	30

JAMES MCEWAN AND CO. (LIMITED).—The eighth annual general meeting of James McEwan and Co. (Limited) took place on Wednesday at the Cannon-street Hotel.—Mr. A. J. Malcolm, in moving the adoption of the report, said that the accounts, though exhibiting some improvement, represented a period of slow and reduced trade, accompanied by keen competition, and at unremunerative prices. The gross profit showed an increase of £7000 over 1894, while business expenses were a little less than for that period, although they included at least £1500 of an exceptional nature, not likely to recur. The reduction of expenses had now reached the utmost limit consistent with efficiency. It was impossible to deny that present appearances in the colony were brighter than at any period during the past four years. This was the result of two important factors—firstly, the greatly improved position of Australian Government finances; and, secondly, the recent material advance in the prices of wool. In the coming year, therefore, it might be hoped that the company would share in the general improvement, and have done with vexatious losses.—The report was unanimously adopted.

THREATENED GREAT COAL STRIKE IN AMERICA.—A cable from New York, dated October 20, states that considerable uneasiness has been caused in business circles by an authenticated report from Pittsburg, stating that the bituminous coal miners in Northern Pennsylvania have been ordered to come out on strike. Fully 25,000 hands are directly affected, and their present demand is for an advance of 5 cents per ton. It is feared that the strike will extend to other parts of the State.

MINING DEVELOPMENT AT LLANGENNECH.—On October 11 the 4-foot vein was reached at a depth of 106 yards in the new pits which Messrs. Thomas Williams and Sons are sinking at Llangennech. The coal proved of abnormal thickness and of excellent quality, while the roof is exceptionally good, being of the hardest rock. A level drift will be commenced at once from the bottom of the pits to reach the 6-foot vein.

#### NOTES FROM ANDALUCIA.

#### PAPER ON THE CUPREOUS PYRITES DEPOSITS OF ANDALUCIA AND ALGARVE.

#### RETROSPECTIVE AND PROSPECTIVE.

Extracts and Notes from Mining Operations and Reports on these during the past 25 years.

By WILLIAM GUTHRIE BOWIE.

(Continued from page 1280.)

MONG the practical results to be now obtained by this improved geological knowledge are those connected with the deposits formed during the ages since the last elevation up to date, and accumulated in other parts from the waste collected from denudation. It will be enough to illustrate this by one example as interesting as these cupreous pyrites masses. This refers to the ferruginous conglomerates, known in the country by the name of "tobas," which are formed from the weathering of the enclosing rocks and the cupreous masses themselves, as represented in their outcrops, and these cemented again by ferrous and ferric matter, and usual chemical combinations forming conglomerates, and are hence common deposits of all the geological ages wanting. It has been intimated that denudation has no doubt been going on ever since the age closing the Lower Carboniferous up to date, and particularly since the age of the Lower Strata of the Liassic of the Jurassic. Now, this has, while sweeping away incalculable portions of the carboniferous strata, if not also more extensive portions of the Liassic, made the outcrops of the cupreous pyrites masses very visible, and these have all been surveyed and distinguished from the conglomerates produced from their waste, which conglomerates are generally in relation with or in the vicinity of these outcrops, which themselves are in fact only altered portions of the pyritic masses. Many errors have been committed in respect of these ferruginous conglomerates, for they resemble the true outcrops, and many have taken them as indicators of ores in depth below them, when the fact is they rest, as conglomerates formed like them always do, unconformable, on any rock, and according to the circumstances under which collected. In no mine are these ferruginous conglomerates more developed than at Rio Tinto, where they are so excessively developed as to form the most striking and imposing feature around these mines, causing an impression of immense wealth and abundance of cupreous pyrites, and by them can be observed, that many estimations being made through the ignorance of their geology and nature, have been altogether mistakes, and even mining operations have been carried out in some, naturally only to be disappointed.

In fact, it is observed among the practical engineers and managers that where much of this ferruginous conglomerate is found, the masses producing it are generally in exposed positions, and very little ore left, attributed to excessive denudation owing to their easily attacked position. This is found true in many places, and it is evident in the South Masses of Tharsis and Nerva Masses of Rio Tinto, so here we learn an opposite lesson to what they were considered to be in older times, when their presence was accounted a good sign, while now we prefer to see them in less force, also when in force are sure signs of masses of hypogene rocks being at hand. Then we learn another lesson from these in respect of denudation. We see how ferruginous masses can be formed by this sedimentary and chemical precipitation, derived from the wasting away of others, while in the sulphides, or rather pyrites observable, forming in the stratas of the Tertiaries, derived from the ruins of the whole of the formations, we can appreciate the hidden agents of metamorphism, whether assisted by organic or inorganic matter, to produce masses of pyrites interstratified in the masses of its sediments, concentrated or impregnated with the necessary materials forming the constituents of pyrites and all its varieties. But we also learn that denudation has been working against us, and let any one try to imagine the effects of this during the cycles of the geological ages already referred to, and seeing the nature of the tilted stratas, he cannot help but consider that more has been carried away than is yet remaining, and that the greater number of the cupreous pyrites masses we are now exploiting are the mere roots of what were originally, when first elevated, extensive stratas of the same materials.

Now does the lesson end here, and we may mention another, for by properly estimating the outcrops, conglomerates, and exposure to denudation, and comparing these with the characteristics the masses they concern display in their exploitation, we can estimate the strength or weakness of the sedimentary strata enclosing the deposits of ore, and the probable content of this, as well as possible yearly exploitation, and hence the producing life of any mine, at least to when decline is positively evident, if the calculated rates of exploitation are maintained. As an example of this, we may compare Rio Tinto and Tharsis in these respects. Fortunately, plans exist of the true outcrops, and of both of these mines before open cast works were begun in either, hence the plans of Rio Tinto prepared for its sales, and those of Tharsis when in a law place as to some of the concessions, are used for the

containing copper in quantity to be able to treat with profit. Now, seeing the characteristics of these masses, what then may be expected to be the flourishing life of Rio Tinto—that is, until it reaches the same stage as Tharsis group, of depending on local treatment alone for its production of copper? Why, at the same rate as the exploitation has been proceeding, which, compared with that of Tharsis group and its outcrops, is on a scale in greater proportion to its outcrops at Rio Tinto, and hence means something less than 30 years, as in the former, and here in Rio Tinto 22 of these have already gone.

(To be continued).

## PROVINCIAL SHARE MARKETS.

### THE CORNISH MINE SHARE MARKET.

**M**R. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares, Redruth, Cornwall, reports under date of October 24 (4 o'clock) as follows:—We have had a dull, quiet market this week, with but little business, and but little change. There is but very little doing to-day. Following are quotations:—Blue Hills, 2s. to 3s.; Carn Brea, 13s. to 16s.; Dolcoath, 17s. to 18s.; Killifreth, 9s. to 10s.; South Crofty, 1s. to 1s.; South Wheal Frances, 1 to 1s.; Tincroft, 5 to 5s.; West Frances, 1 to 1s.; West Kitty, 4 to 4s.; Wheal Bassett, 3s. to 4s.; Wheal Grenville, 13 to 13s.; Wheal Kitty (S. Agnes), 1s. to 1s.; Polberro, 2 to 3s.

Mr. MICHAEL WILLIAMS BAUDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (October 24) as follows:—The mining market at the opening of the week was dull and neglected, but on the improvement on tin shows more firmness and prices hardened slightly:—Blue Hills, 4s. to 5s.; Carn Brea, 16s. to 17s. 6d.; Devon Consols, 2s. to 3s.; Dolcoath (fully paid), 18s. 6d. to 19s. 6d.; ditto (partly paid), 5s. 6d. to 6s.; Drake Walls, 1s. 6d. to 2s.; East Pool, 4 to 4s.; Killifreth, 10s. to 11s.; Levant, 4 to 4s.; Polberro, 16s. to 17s. 6d.; South Crofty, 1s. to 1s.; South Frances, 1s. to 1s.; Tincroft, 5 to 5s.; West Frances, 15s. to 16s. 6d. c.p.; West Kitty, 4 to 4s.; Wheal Bassett, 3s. to 4s.; Wheal Grenville, 13 to 13s.; Wheal Kitty, 7s. to 8s.; Wheal Metal (fully paid) 5s. to 6s.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers and Mining Share Dealers, Redruth, write under date of October 24:—The market continues quiet, but to-day there has been rather more enquiry for shares in sympathy with tin. Quotations:—Blue Hills, 1s. to 3s.; Carn Brea, 1s. to 1s.; Dolcoath (fully paid), 17s. to 18s.; ditto (5s. paid), 4s. 6d. to 5s. 6d.; East Pool, 4 to 4s.; Killifreth, 9s. 6d. to 10s. 6d.; Polberro, 2 to 3s.; South Crofty, 4 to 4s.; South Frances, 1s. to 1s.; Tincroft, 5 to 5s.; West Frances, 1s. to 1s.; West Kitty, 4 to 4s.; Wheal Bassett, 3s. to 4s.; Wheal Grenville, 12s. to 13s.; Wheal Kitty, 1s. to 1s. Tin, 6s.

### MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write October 24 (noon):—Dullness, and at times very distinct flatness, has been the prevailing feature in the market during the past week. All sections have apparently hung upon the movements of Kaffirs, and herein a big drop has occurred—a drop which, notwithstanding a distinct rally yesterday afternoon, which has been maintained up to writing, has left prices herein a long way below figures of a week ago in most instances. The influence has, as we have said, been predominant, and its result is shown in lower prices in all departments of rails. In home rails Caledonian are undivided, and Great Eastern, as exceptions, mark small fractional advances on the week; but for the rest all are down. The declines in home rails are not severe in amount, although general. In Canadians, Trunk issues are very distinctly lower, and in Americans an all-round decline is to be noticed, the gold question again being used to depress values. Declines of 1s. or over are very common in Yankees, and there is no instance of advance to make an exception. With the foregoing as general, we may pass to the daily movements on Friday last; the news (or rumours), re the shipbuilding dispute, put home rails generally easier. Early on Americans began badly, but got a little strength, comparatively, towards the close. In Canadians Trunks were a poor market most if not all of the day. Kaffirs went down speedily, but later in the day prices mended, in some cases considerably, though the improvement did not quite wipe out the declines of earlier on. Saturday found home rails better generally, Scotch stocks being to the fore in the advance. In Canadians, Pacifics were wanted, but Trunk issues were neglected. Americans a steady market all day. Monday saw a little swing back in home rails. In Canadians, Pacifics were lower (about 1s. on the day). Trunk issues, too, were lower, as also were Mexicans, which began pretty well, but sagged off, closing at about the lowest figures of the day. Tuesday brought in no changes of importance in home rails. In Canadians, Pacifics were again down, and Trunk issues fell away on their traffic being disappointing. Americans, after opening somewhat steady, held up till nearly the last of the day, when slight ease in figures was to be noticed. Movements in mines irregular, but lower prices on balance are the rule. Yesterday was a "flagging" day, all departments of the market showing depreciation in values. Canadians show an all-round decline in Trunk issues. Home rails only fractionally lower, as also were Americans. Traffics announced in home rails are mostly increases, but not of much amount, and North-Easterns conspicuously a decrease. Mines were awfully flat early on; one remark occurring on the wire, "Can't sell anything." Later, however, things improved, and, as against morning prices, some very distinct rallies in values were marked. For changes in the miscellaneous markets (as they are so contradictory) we need only refer to the detailed alterations as follow:

**COROBOLS**.—Higher: Two and Three-Quarters per Cent., 1-16.  
**COLONIAL STOCKS, &c.**.—Lower: New South Wales Inscribed, 1s.; New Zealand Inscribed, 1s.; Victoria Inscribed, 1s.

**CORPORATION STOCKS AND DEBENTURES**.—Higher: Barnley, Three and a Half per Cent., 1; Liverpool Three and a Half per Cent., 1s.; Manchester Four per Cent., 1s.; Nottingham Three per Cent., 1s.; Oldham Four per Cent., 1s.; Southport Three and a Half per Cent., 1s.

**FOREIGNERS**.—Higher: Italian Rentes, 1s.; Mexican, Six per Cent., 1s.; Turks D., 1s.—Lower: Argentine Six per Cent., 1s.; ditto Five per Cent., 1s.; Brazilian Four per Cent., 1s.; Portuguese Three per Cent., 1s.; Russian Four per Cent., 1s.; Spanish Four per Cent., 1s.; Uruguay Three and a Half per Cent., 1s.

**BANKS**.—Higher: Bank of Bolton, 1s.; Lancashire and Yorkshire, 1s.; Manchester and Liverpool District, 1s.; Union of Manchester, 1s. to 1s.—Lower: Bank of Liverpool, 1s.; Imperial Ottoman, 1s.

**INSURANCE**.—Higher: Commercial Union, 1s. to 1s.; Liverpool, London, and Globe, 1s.; London and Lancashire, 1s.; Positive Life, 1s.; Royal, 1s.—Lower: British and Foreign Marine, 1s.; Lancashire, 1s.; Manchester Fire, 1-16; National Boiler, 1s.; Thames and Mersey, 1-16.

**COAL, IRON, &c.**—Higher: John Browns, 1s.; Cammells, 1s.; Fletcher Russell, 1s.; Staveley C. I.—Lower: Bolckow Vaughan (£20 paid), 1s.; Bolckow Vaughan (£12 paid), 1s.-16 to 1s.; Parkgate, 1s.; Rhymeyns, 2s. to 3s.

**TELEGRAPHES AND TELEPHONES**.—Higher: West India and Panama, 1s.; National Telephone, 1st preference, 1s.—Lower: Anglo American Preference, 1s.

**BREWRIES**.—Higher: Marseys Ordinary, 1s.; Taylor's Ordinary, 1s. to 1s.; Shellfalls, 1s.—Lower: Allissopps, 1s. to 1s.

**MISCELLANEOUS**.—Higher: Bodegas, 1s.; Bradbury & Co., 1s.; Chadwick, 1s. to 1s.; Earles Shipbuilding, 1s.; Hetherington's, 1s.; Pacific Steam 1s.; Star Paper, 1s.; Sues Canal, 1s.—Lower: Blackpool Tower, 6d.; Brunner Mond, 1s.; Conns, 1s.; Fowler Bros., 1s.; London and Manchester

Plate Glass 1s. to 1s.; United Alkali 7-16ths; West India and Pacific Steam 1s.; Canal Ordinary, 1-16th.

LATER (4 P.M.).—Home rails the turn better to-day. Canadians, no change worth naming. Americans lower again. In mines, the better tone of yesterday was maintained at the opening. For a little while prices went a bit "off," but recovered materially, maintaining such recovery down to close. Ship canal shares offered to-day at about the lowest prices yet touched.

### SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

**STIRLING**.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (October 24), writes:—During the past week the market has continued under the influence of liquidation sales in Kaffirs, and prices are therefore lower. Trade reports, however, continue favourable, and the money market easy.

In shares of coal, iron, and steel companies prices are steady. Carnforth are at 9s.; Calderbank Steel 10s.; Fifeshire Main 12s. 6d.; Marbella 53s.; Niddrie 44s. 3s.; Steel Company of Scotland 82s.

In shares of foreign copper concerns prices have declined on realisations. Arizona touched 50s., Tinto 18s., and Tharsis 99s. 6d., but are now all better. The 82s. shares of the new company—Anaconda—have been introduced on the market about 6s. Killifreth tin shares are at 8s. to 10s.

In shares of gold and silver mines a large amount of business has been done, and between closing weak; bull accounts and bear sales prices have been seriously depressed. The principal transactions have been in Chartered, which declined to 5s.; East Rand to 7s.; Consolidated to 15s.; Randfontein to 63s.; Klerksdorp to 16s.; and Sheba to 34s., but are now all better. The Mysore Company announce a dividend of 2s. 6d., payable November 16 which compares with 1s. at this time last year. The Holcomb Valley Company have started washing, and the result is expected to be known next week. African Recovery are at 38s.; Afikander 35s.; African Consolidated 3s. 9s.; African Association 6s.; Bayley's Reward 8s. 3d.; Bechuanaland 45s.; Broken Hill, 42s. 6d.; Balaghat, 6s.; Bonanza, 42s. 6d.; Blagrove, 3s. 9s.; Balkia 1s. 8s. 3d.; Black Flag, 35s.; Big Golden Quarry, 2s. 3s.; Caraval, 1s. 3s.; Coetzestroom, 6s. 3d.; Caledonian, 4s.; Doornkop, 7s. 6d.; Eastleigh, 28s. 9s.; Elkhorn, 5s. 3d.; East Orion, 15s. 6d.; Fauvel Recovery, 13s. 6d.; Gem of Cus, 6s.; Great de Kaap, 6s. 6d.; Guy Fawkes, 20s. 6d.; Graskop, 6s. 6d.; Ginsberg, 30s.; Hauraki, 11s.; Hannan's 100 Acres, 31s. 3d.; La Plata, 3s.; Londonderry Extended, 5s. 9d.; Londonderry Consols, 5s. 31s.; Lisbon, 7s. 6d.; Mawson's Reward, 17s. 6d.; Montana, 7s. 6s.; Mines Acquisition, 5s. 3d.; Murchison New Chum, 22s. 6d.; Metropolitan, 42s. 6d.; New Louis d'Or, 3s.; Naltzvkop, 4s.; Orion Belt, 31s. 3d.; Piggy's Peak, 11s. 3d.; Pestarena, 6s. 3d.; Royal Niger (fully paid), 37s. 9d. to 42s. 6d.; Rand Roodepoort, 11s. 3d.; South African General Development, 9s.; St. John de Riv, 21s.; Town Properties (W.A.), 15s. prem.; United Gold Fields of Manica, 9s.; United Rhodesia, 24s.; Victoria and Altamira Preference, 24s.; West Australian Share Corporation, 21s. 3d. prem.; Wealth of Nations, 15s. prem.; Woodstock Transvaal, 1s. 6s. prem.; and Willoughby, 42s. 9d.

In shares of local and miscellaneous companies prices are generally easier. Oil companies' shares lower on less hopeful trade prospects. Broxburn are at 12s.; Pumperston 9s.; and Young's 49s. 6d. Cheshire Alkali Preferred offered. Elmore Wire 10s. to 15s.; Nobel's Explosives 15s.

### EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of October 24:—Markets have, since last week's report, been in a depressed condition. In home railways, Caledonian Deferred has gone from 52s. to 52s., North British from 43s. to 42s. ditto Ordinary Preference from 82s. to 82s. Highland, on the meeting yesterday, has fallen to-day from 114s. to 109. North British and Mercantile Insurance shares have declined from 40 to 39s. Scottish Union A from 90s. to 89s. Scottish bank shares have been very stationary, a fractional relapse in Commercial being the only change till this afternoon, when National rose from 33s. to 33s. In mining shares, Fife Coal have risen from 18s. to 19s.; Lochee and Capledrae from 20s. to 22s. 6d.; Merry and Cunningham Preference from 13s. to 14s. while Marbella Iron have fallen from 57s. to 53s. Arizonas from 58s. to 53s.; Rio Tinto from 18s. to 18s.; Tharsis from 102s. 6d. to 99s. 9d. Pumperston oil shares have receded from 9s. to 9s.; Young's Paraffin from 51s. to 49s. 6d.

### THE IRON AND STEEL MARKET.

The following is the Quarterly Report of Messrs. BARRY, HEAD, and CO., October 22:—

#### TO-DAY'S APPROXIMATE BASIS PRICES.

#### WITHOUT ENGAGEMENT.

	Price per ton.	F.o.b. at	Last discount.
		ton.	Per cent.
<b>IRON.—</b>			
Superior Crown Bars	£5 10 0	Middlebrough	3
Common Bars	5 5 0	do	3
Ship Plates	5 2 6	do	3
Ship Angles	4 17 6	do	3
Single Sheets	6 10 0	do	3
Puddled Bars	3 5 0	do	nett.
<b>STEEL.—</b>			
Bars	5 10 0	do	3
Ship Plates	5 5 0	do	3
Ship Angles	5 2 6	do	3
Hoops and Strips	6 0 0	do	3
Charlier Shoe Bars	6 5 0	do	3
Cat Nails	7 5 0	do	7 1/2
Heavy Rails, 56 lbs.	4 12 6	Works Port	nett.
Light Rails, 14 lbs.	5 2 6	do	do

Terms: Cash against mate's receipt.  
For definite quotation, kindly submit specification.

**CARDIFF EXHIBITION**.—A meeting of the executive council of the Cardiff Exhibition was held on Monday afternoon in the Town Hall.—Councillor F. H. Jotham presided over an attendance comprising Councillor T. H. Riches, Mr. E. W. M. Corbett, Mr. Lacelle Carr, Mr. J. H. Halliett, Mr. C. J. Jackson, Mr. Trebarne Rees, Mr. H. J. Simpson, and Mr. Todd, with Mr. Walter Cook, honorary secretary.—A letter was read from Sir W. T. Lewis stating that Lord B. had signified his willingness to allow to be included in the taking of the Exhibition the avenue of trees in Cathays Park, on condition that no Chinese lanterns or any lights shall be suspended from the trees.—Councillor Riches raised the question of the constitution of the General Purposes Committee, and its duties were defined. The Chairman and secretary of every sectional committee were added to the General Purposes Committee.—The Executive Council then revised the form of agreement with Mr. R. P. Calley for catering refreshments, and for furnishing side shows, &c., and eventually authorised its being formally entered into.

**COLLIERY ACCIDENT IN THE GARW VALLEY**.—An alarming accident happened at the International Colliery, in the Garw Valley, South Wales, on October 15. A tram of coal was being raised to the surface, and was within 40 yards of the pit bank, when by some means the cage tilted and precipitated the tram and its contents to the bottom. There were 278 men in the pit, and their egress from the pit was for a time cut off. The cage was again got to work, however, about 10 hours later, and it was found that the fall of the tram had not been accompanied by any injury to limb or loss of life.

## WANTED.

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A SSISTANT Wanted in Mining Engineer's Office in London, and Rock-boring Machinery preferred. Address, stating age, qualifications, and salary required, to "R. S. MINING JOURNAL Office, 18, Finch Lane, London, E.C."

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Arundel Castle (via Canaries) ... Nov. 22 Nov. 22  
Also for Madagascar and Mauritius.  
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## MINING NOTES FROM JOHANNESBURG.

By H. BUSH, M.B.

## New Primrose.

On this property the 10th and 11th levels are opening up well on all three reefs, and good bodies of ore are being obtained of increased value. The development is gaining on the mill to the extent of 2000 tons per month. It is noteworthy that no further expenditure will be required unless the management elect to erect an additional 40 stamps. It is probable that the October output will show slight decrease owing to alteration of mill engines into triple expansion. Further, the 160 stamps being driven by two auxiliary engines, they will not be able to keep up speed. There are 150,000 tons of slimes, valued at 4 dwt., which will be treated as soon as parties who are tendering have been selected. Large dams are being built to hold one year's slimes. The crushing is 25,000 tons per month, giving from mill and cyanide 11 dwt.

## Kimberley Roodepoort.

The old 40 stamp mill has been overhauled, and will shortly start. The western main incline shaft, 16 feet by 5 feet 6 inches within timbers, is now down 120 feet. In the centre of the property a 24 feet head gear is going up, and sorting bins, Gates' breakers, and ore bins are being erected. When the shaft is connected in the western section everything will be ready for the mill. At present there are 45,000 tons of payable ore ready for stamping. It is expected that another 50 heavy stamps will be added shortly. The mine is opening well both on the main reef and south reef leader. They run each about 10 dwt.

## Ginsberg.

From plates and cyanide 13 to 14 dwt. are being obtained. Additional machinery is being erected; 30 additional stamps making 40, are going up, new cyanide plant is being put in, and the central incline shaft is being sunk from which all ore will be raised. The shaft is down 400 feet, and the mine continues good, showing average assays of 17 dwt. There is an abundance of water, and a new dam is being built on a water-right.

## Aurora West.

The Main reef leader and south reef have been found by cuttings into the Main reef. This Main reef is a large body, and the greater portion of it is a payable proposition. An incline shaft is going down in the centre of the property.

## New United.

The old main incline shaft has been re-timbered, and is now of the size 16 feet by 5 feet 6 inches. When down to the third level the mine is practically opened up. Driving is taking place east and west, and prospecting will be continued for 12 months. If sufficient payable ore is found, more machinery will be immediately ordered.

## New Rietfontein.

The new rock breakers have started, and also the sorting belt. In No. 2 shaft on both sides at the 6th level, the mine is showing well. The reef on the west side has been again encountered after being disturbed. It is 8 to 15 inches in width, and assays 3 to 5 ounces. In No. 7 shaft driving east and west shows payable reef 2½ feet wide, assaying 17 dwt. A series of bore-holes 400 feet from the outcrop is going down to locate the reef, so that the best sites for sinking new incline shafts may be found.

## Buffelsdoorn Estate.

Active development at Nos. 3, 4, 5 and 6 levels is taking place. At present there are 120,000 tons of ore in sight. Systematic assays for the first time taking place on a reef of 4 feet in the drives, and average 13 to 15 dwt. By January next year, 70 additional stamps, so making 100, and 40 will have been erected. Last month's decrease of output is accounted for, firstly, by the cutting of stations, so that it was not possible to get to the stopes in the lower levels, and secondly, to the breakdown, and, therefore, scarcity of coal which is obtained from a mine four miles away. With a sorting floor erected, there will be a profit per ton on this property of 9s. The water supply is ample that the subsidiary companies will be furnished by the parent company. A considerable amount of money is being spent on quarters, dams, and machinery.

## Molyneux Mines West.

Good work is being done on this property, the reef is 6 inches to 18 inches in width, and has been opened up in several places, giving assays of from 2 ounces to 8 ounces to the ton. Six incline shafts have been commenced, and two adits have been put in, giving as much as 1000 feet of backs. The winding and hoisting machinery has been landed, and is now on its way to the property.

## Fosen Block Twin Reefs.

Consists of 67 claims, the capital is £60,000 with £15,000 cash in hand. It is a pleasure to notice the low capitalisation of the Rose Blocks. The main shaft is now down 135 feet, and has now struck the Standard series of reefs, having previously struck the Chester and Van Dyk at 95 feet. Driving on both series is being opened up, showing fair pannings. The main incline shaft is so well equipped that it will be in a position to strike the lower formation lying under the standard, which is the same opened up nearly to Klugersdorp on the West Rand Mines. The reefs dip at an angle of 25°.

## Violet.

The main incline shaft is being sunk, and driving has already taken place. There will shortly be large development of this property. The new manager is to take up his position within a month.

## Henderson's Nigel.

Of 221 claims is being prospected by means of a diamond mill.

## Lyndenburg Estates.

Prospecting on the Erasmus Hoop Farm has resulted in the discovery of several good reefs in addition to the Sherwell reef, assays on which go 1 ounce 16 dwt.

## Gold Fields of Lyndenburg.

This large property consists of 15 farms—viz., Hebron, Craigburn, Arthur's Seat, Brooklyn, Greenvalley, Wales, Castle, Welgevonden, Violet Bank, Zoknoy, Woeritzicht, London, Ouvrengucht, Chester, and Bedford. The consulting engineer is Mr. Sturt, and Mr. Richardson is the manager. Prospecting is being systematically pursued, and the reef shows between 16 and 20 inches wide. The prospects of this property are distinctly flattering. The capital is £325,000, with £100,000 working. The reefs, which are quartz, lie horizontally between sandstone, and gold is found evenly distributed throughout.

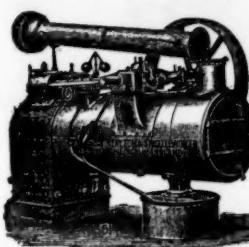
## Horsham Monitor.

Sinking on N. 1 shaft is taking place from the first level of 122 feet to 300 feet. A start has been made on the main incline shaft; orders for all requisite machinery have been placed.

## Rand Minos.

Stamps by Fraser and Chalmers with 1050 lb. heads have been ordered, 200 for the Rose Deep, 200 for the Crown Deep, 200 for the Juniper Deep, and 100 for the Nourse Deep.

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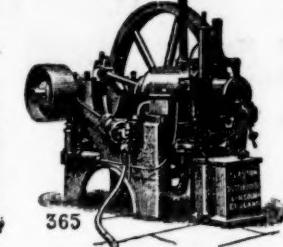
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Lot 1.—All those PIECES OF LAND in the Parish of Holywell known as the Wharf or Shipping-place, adjoining the River Dee, and forming a continuation of the Holywell Railway leading down to the same river.

Lot 2.—All that PIECE OF LAND in the Parish of Holywell, with the Mill, Warehouse, Offices, and other Buildings erected thereon, and known as Parry's Mine Mill, with the pools of water, dams, water-wheels, shafts, and going gear thereto.

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And also all VEINS, SEAMS, BEDS and QUARRIES of LIMESTONE in, under, and about all and every the lands and grounds of Sir Pyers Mostyn lying and being within the Parish of Holywell, with full liberty to dig, work, and carry away all Limestone therefrom.

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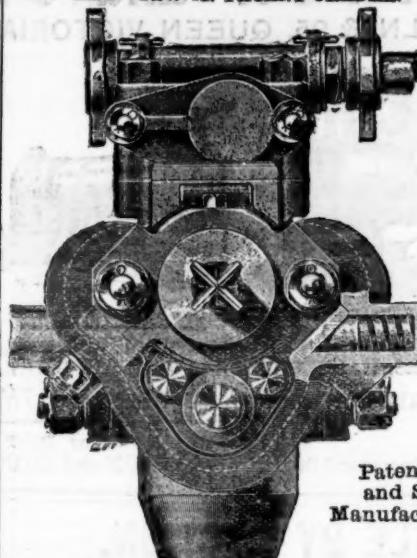
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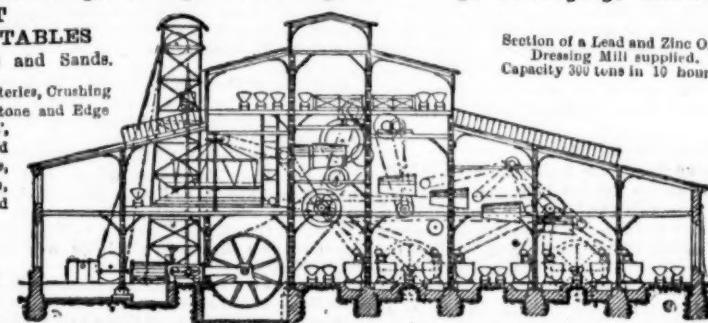
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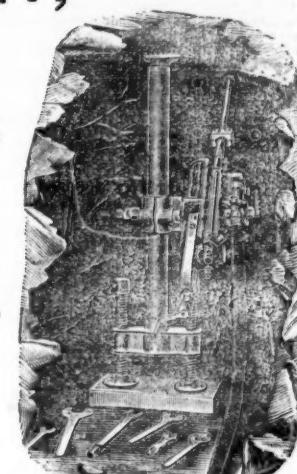
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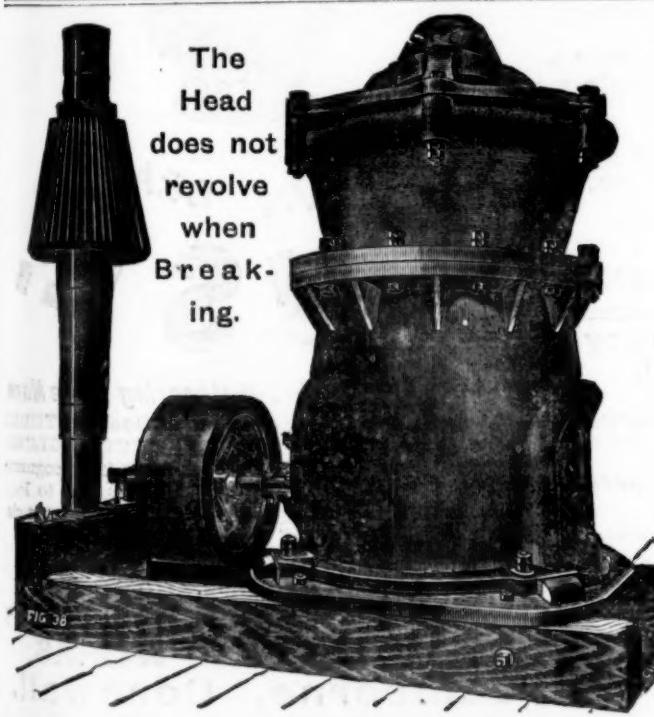
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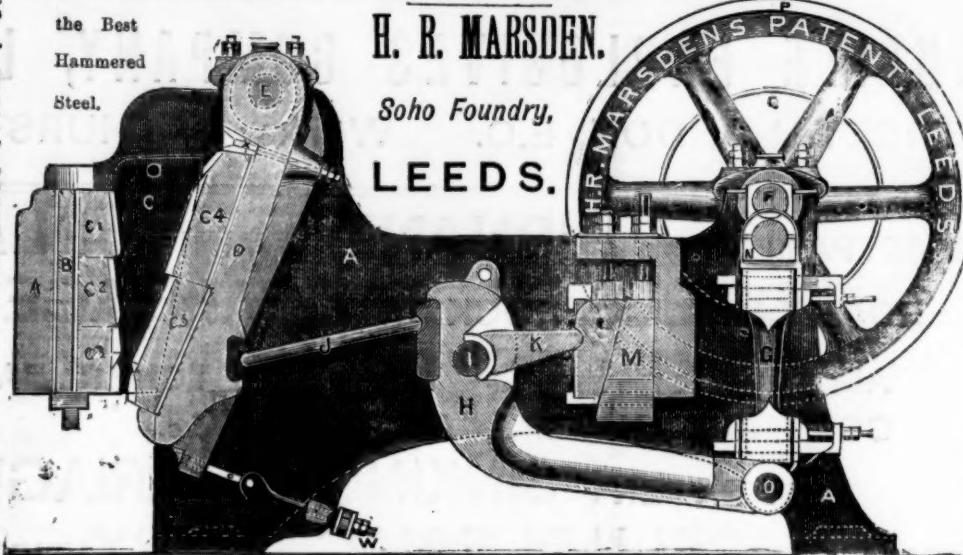
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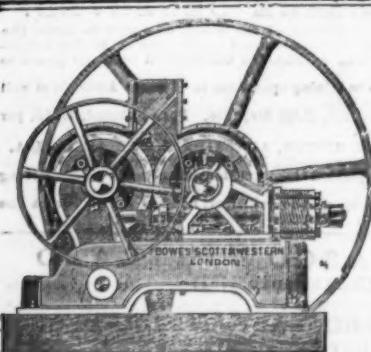
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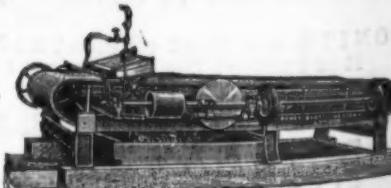
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